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Population trends and building needs, organization, innovations, educational programs, summer school, cocurricular learning opportunities, special education for the handicapped and maladjusted, nonclassroom professional services, school-community relations, and the realities of the educational challenge are discussed and evaluated with respect to current major education trends.

Major findings indicate that: improved ways of teaching and learning are being developed in the schools; new approaches to learning are concerned with recent research into the nature of the human mind, the nature and structure of the major disciplines, and the new tools and techniques of instruction; there is increased rigor and insistence upon mastery of academic subjects; recent developments in school staffing and team teaching more fully utilize the professional competencies of school faculties; and innovations include programed instruction, television teaching, and language laboratories.

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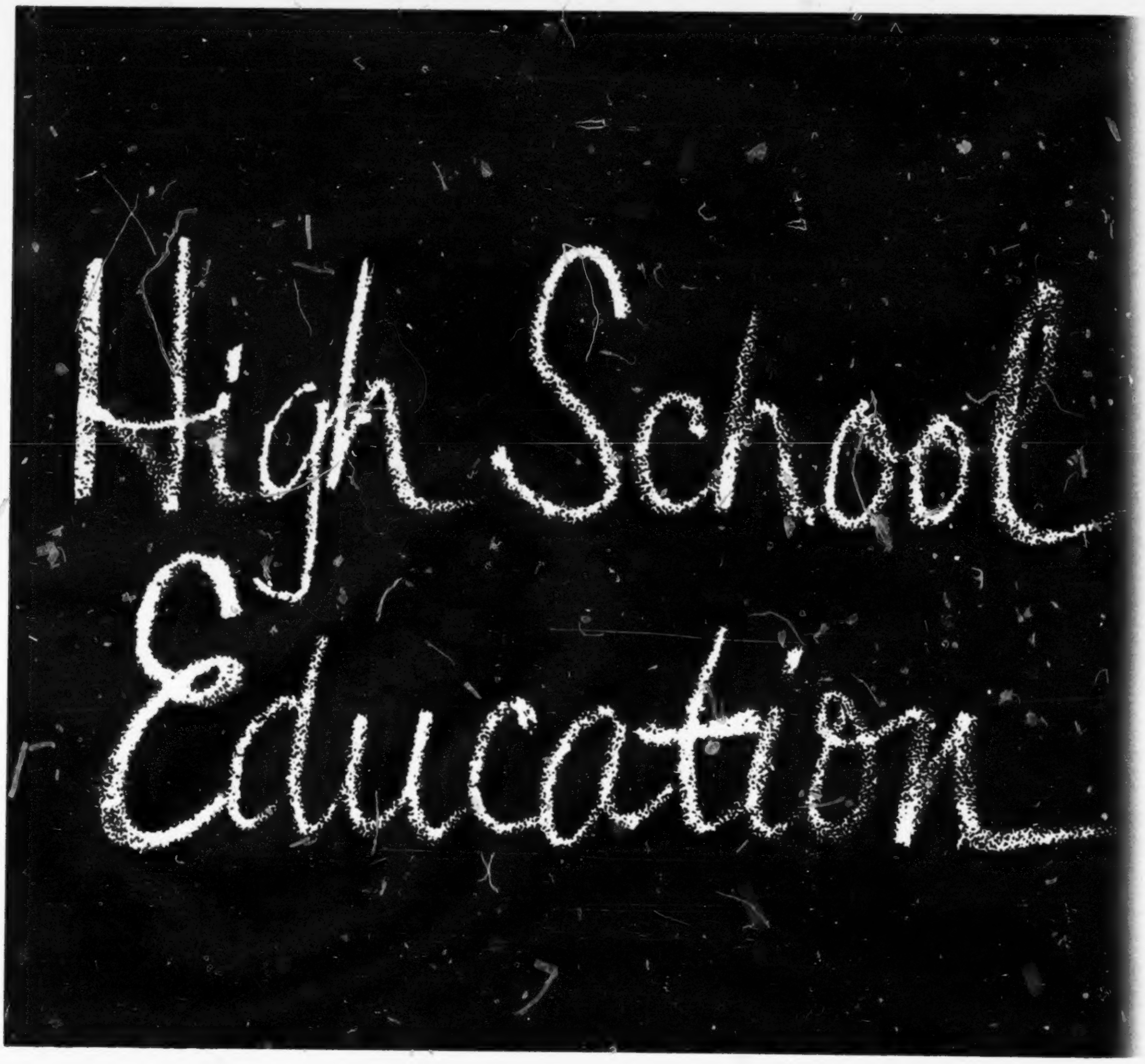

High School Education

CHICAGO PUBLIC SCHOOLS
AUGUST 1964

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HIGH SCHOOL EDUCATION
IN THE CHICAGO PUBLIC SCHOOLS

Study Report Number Seven

1964 Series

BENJAMIN C. WILLIS
General Superintendent of Schools

CHICAGO PUBLIC SCHOOLS
August 1964

Educational Materials Laboratory
Office of Education
MAY 1965
DEPARTMENT OF
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FOREWORD

Study reports of the various educational programs have been made from time to time during the past ten years. These studies are in addition to the review and revision of curriculum materials. Reports have included such areas as elementary education, secondary education, junior college, teachers college, recreation, and the summer school program. Some areas have been formally reviewed and "next steps" recommended once during the past decade while others have been reviewed two or three times.

This report, High School Education in the Chicago Public Schools, is the result of a study conducted by a city-wide committee, as were those named above. The membership on this committee reflects the various geographic sections of the city; the pertinent areas of the educational program, instructional materials, and/or facilities; and the various organizational levels of teaching, administration, and supervisory responsibility.

This report is a contribution to the study of schools approved by the Board of Education of January 9, 1963, and will be reviewed by the Chicago Public Schools Survey Committee.

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Chapter I

INTRODUCTION

In August 1957, a study committee submitted a report on secondary education in the Chicago public schools. The adoption of a program requiring four years of English, three years of social studies, and a three-unit sequence of mathematics-science was the result of that report. Subsequently Dr. James B. Conant's survey of the nation's secondary schools, The American High School published in 1959, defined basic issues in curriculum and organization that had been recognized and brought out in the August 1957 report on the Chicago high schools, entitled Secondary Education.

What shall the high schools teach, to whom, how, and for what purpose? What organization, staff, buildings, equipment, and instructional aids can best achieve our goals? These are the questions to which Chicago public school educators, by means of continuing evaluation and periodic detailed reappraisals, seek to find answers that will keep the program of the secondary schools, at any given time, the best that can be designed for the youth in Chicago.

Education seeks the harmonious development of all the faculties of man. The Ordinance of 1787 expressed this idea when it said: "Religion,morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged." Today's education is thus rooted in the heritage of the nation's past as well as in the dynamics of the present culture. Ideally, society must provide opportunity for every member to develop to his maximum potential as an individual; only then can he make his best contribution to the larger community. To accomplish this objective, it is necessary to look at youth and determine its needs, to examine society and to appraise its goals. There must be continuing reevaluation of the public schools and consequent adaptation in educational planning if society is to become progressively better.

The philosophy of the Chicago public schools expresses concern for the total welfare of the student: the student's role in the family, in school, in the world of work, and in the larger community. Since students vary in backgrounds and capacities, the curriculum must provide an instructional program to meet the diverse needs of students from a wide range of socio-economic and ability levels.

High school enrollment, due to recent population growth, has increased and will continue to expand rapidly in the immediate future. The impact of this growth will place greater responsibilities upon the schools. As a nation, we are committed to the premise that all children shall learn. The national welfare depends ultimately upon the quality of each individual's achievement as well as upon group effort. Current educational planning emphasizes innovation and continuing improvement of the learning situation in order that the goal of excellence may be attained by all youth. This concept of excellence embraces the ideal of developing and of using fully whatever aptitudes one possesses.

In view of this, improved ways of teaching and learning are being developed in the Chicago public schools. New approaches to learning are concerned with recent research into the nature of the human mind, the nature and structure of the major disciplines, and the new tools and techniques of instruction. Consequently, there is increased rigor and insistence upon mastery of academic subjects. A recent development in school staffing, team teaching, more fully utilizes the professional competencies of school faculties. Additional innovations include programmed instruction, television teaching, and language laboratories.

The program of the high schools today provides for all students--the collegebound, the wage earner, and the homemaker. The demands of the sixties are different from the demands of the fifties. Automation has made the unskilled and undereducated obsolete in society today. With many new problems confronting the world, society finds itself in a new dimension of time.

The continuing progress of a free society depends upon the ability of the high school to provide an education for all young people that is realistic and appropriate for the emerging future.

The vocational high school in the Chicago public schools is treated in Study Report Number Eight in this 1964 Series. This report, High School Education, deals with general and technical academic high schools.

Chapter II

VIEWPOINTS ON SECONDARY SCHOOL EDUCATION

The education provided the youth of a nation is conditioned by the kind of society in which youth is to function. In a democratic society, education stresses the inherent dignity, freedom, and worth of each person. In devoting attention to the worth of the individual, the schools must be ever mindful that they are concerned not only about the present status and worth of the individual, but also with what each may and can become regardless of racial, religious, economic, social, or national background.

In order that each person shall attain a feeling of worth and dignity, the secondary schools offer educational and guidance opportunities to help each student find and develop his talents. This involves basic studies and exploratory experiences in both curriculum and co-curricular areas. The following quotation expresses the basic assumptions relative to education in the United States.

> The educational needs and problems of each nation have their own peculiar flavor. No nation can copy another. The American problem is conditioned by our traditional dedication to the proposition that most of our children shall have a long educational experience, that no child shall be deprived of the fullest opportunity to develop his own talents, and the people of each local community shall, to a large degree, be autonomous in the decisions they make about the education of their children. In theory we intend that the brilliant child shall be able to develop brilliantly; that the slow or backward child shall be nurtured patiently; that the artisan shall not be considered inferior to the intellectual because he is an artisan if only he is a good one; that no one shall be condemned to a lowly position or elevated to a high one by the mere circumstances of wealth, power or prestige of his ancestors.[1]

In a democratic type of government where each individual has an opportunity to register his views and opinions at the polling place, every citizen must become informed and make every effort to understand the forces and conditions that prevail. The free and open society grows and prospers as the needs of the social group and the needs of the individual are coordinated. The demands of the democratic life require the exercise of good judgment by each member of society.

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[1] U. S. President's Science Advisory Committee, Education for the Age of Science (Washington: U. S. Government Printing Office, 1959), p. 2.

But, the needs of society and of the individual change. Change, ever accelerating in speed and broadening in magnitude, characterizes modern times. This is a period when almost every custom, tradition, idea, and value is under scrutiny. Any reappraisal of the educational system in a time of social change must be made thoughtfully, with due consideration for the values and goals of the society in which the schools function.

Values

The modern high school continues to respect the value judgments expressed in the Declaration of Independence and the Bill of Rights.

> As long as we hold these values we will always (1) provide educational opportunity for all; (2) diversify that education to meet the diverse talents and needs of students; (3) respect the right of the individual to make his own life decisions; (4) encourage and help each individual to make the most of opportunity; (5) teach and practice the truth that freedom implies responsibilities.[2]

The schools are committed to the proposition that all children and youth shall be educated. Chicago public high schools embrace the concept of education for all youth. The goal of developing individuals who can fulfill their responsibility to society and find personal satisfaction in creative and constructive activity is realized by providing a program of instruction which permits (a) a balance between required subject areas and elective or special interest fields; and (b) extensive use of special services of the school and outside agencies.

Goals for Education

In order to aid in inducting youth into responsible and effective citizenship in this dynamic society, nine major functions of living[3] have been identified as goals of the Chicago public schools. These are:

---

[2] Benjamin C. Willis, Education Looks Ahead (Chicago: Scott, Foresman & Co., 1960),

[3] Chicago, Board of Education, Some Guiding Principles for the Chicago Public Schools (Chicago: the Board). (Leaflet, 1951, reprinted in 1963.) p. 22.

practicing American citizenship
using the tools of communication effectively
developing economic competence
improving family living
protecting life and health
building human relationships
enjoying wholesome leisure
satisfying spiritual and aesthetic needs
meeting vocational responsibilities.

The kindergarten through grade twelve curriculum of the Chicago public schools is concerned with the realization of these goals. At the secondary level there is a broadening and deepening of understandings, abilities, attitudes, and values. In view of the dynamics of the times, secondary schools in Chicago are concerned with strengthening the desire and willingness of students to study and learn. The administrative organization, curriculum, instructional materials, and teaching methods of the high school make significant contributions to achieving these aims and should be evaluated in the light of their contributions to the achievement of these goals.

Chapter III

POPULATION TRENDS AND BUILDING NEEDS IN THE YEARS AHEAD

Population Growth

The future of the Chicago public secondary schools is overshadowed by one overwhelming statistic: a projected 25 per cent increase in public high school enrollment in the years 1964 to 1974.[1] The larger student population reflects an earlier elementary school upsurge.

The rapidly increasing public school population clearly reflects a significant growth in Chicago's youthful population. In the decade of the 1950's, during which time the city recorded an overall population decline of 1.9 per cent[2], the percentage within the total population of persons under 18 years of age grew form 25 to 31 per cent[3], and Chicago public school enrollment, kindergarten to college, went up more than 170,000.[4] This increase was due substantially to a soaring birth rate which registered new records for the city in eight of these ten years and reached a peak in 1959 of 98,216 births, 25 per cent more than the 1950 figure.[5] A subsequent 11 per cent decline in the birth rate between the years 1959 and 1962 has not reduced the expectation that the absolute number of births will remain high, as the large number of girls born in the 1945 to 1960 period reach childbearing age in the 1960's and 1970's.[6] The city is faced therefore with a youthful population increase, the effects of which will be felt for decades to come. In conjunction with this growth in the school-age population will come a reversal of the

---

[1] "High School Enrollments," Chicago Public Schools, 1964. (See Graph 1, p. 8 of this Study Report.)

[2] Chicago, Community Renewal Program, Community Renewal Program Report (Chicago: City of Chicago, March, 1964), p. 3.

[3] Chicago, Community Renewal Program, An Atlas of Chicago's People, Jobs and Homes (Chicago, City of Chicago, June, 1963), p. 43.

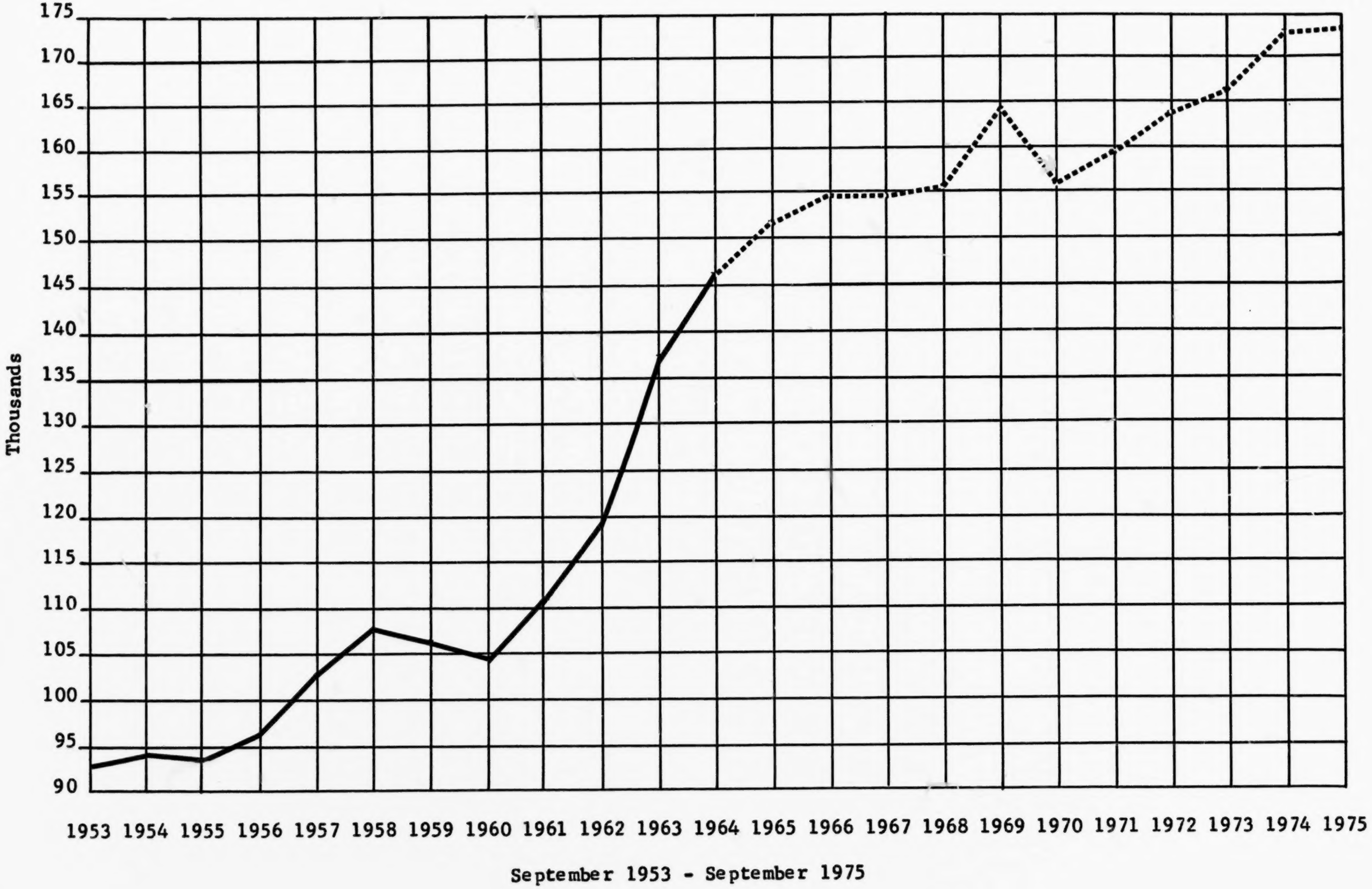
[4] We Build: Ten Years of Growing, 1953-63, Annual Report of the General Superintendent of Schools (Chicago: Board of Education, City of Chicago, 1964), p. 3.

[5] Facts and Figures: Chicago Public Schools, 1962-September 1963 (Chicago: Board of Education, City of Chicago, 1964), p. 25.

[6] Community Renewal Program Report, op. cit., p. 7.

Graph 1

HIGH SCHOOL ENROLLMENTS



declining population recorded in the 1960 census. In its Chicago Community Inventory, the University of Chicago population projection envisions a 224,000 population growth in the city by the 1980 census, with the total population estimated at 3,774,000.[7]

In addition to meeting the educational demands of an increasing number of students, the Chicago public schools, which in 1960 served 68.3 per cent of all high school students in the city[8], must serve a citizenry which is highly mobile. In a five-year period from 1955 to 1960, 53.4 per cent of all Chicagoans changed their places of residence.[9] Decentralization of population was one result of the moves in the decade 1950-60. In that period of time, the inner city lost 10 per cent of its people, while the outer city gained 9 per cent.[10] "The major growth pattern of the Chicago region has been continuously outward from the center."[11] Some neighborhoods lost as much as 25 per cent of their population at the same time that other neighborhoods were making corresponding gains.[12] These population shifts were accomplished, as we have noted, during a time of great growth in student population.

If new high schools are to follow the population surge toward the perimeter, the acquisition of building sites in the area of growth is increasingly important.

School Needs

The magnitude of the demands which will be made upon the secondary schools in the years from 1964 to 1974 in providing seats for the increasing number of students is suggested by an examination of the space-student relationship of facilities available in 1963. The September 1963 enrollment (the adjusted enrollment) of 132,573 secondary school pupils was accommodated by 54 secondary school buildings (including regular, vocational, special, and trade schools). In addition to these facilities, there were 34 branches, totaling 444 classroom areas, located in elementary school buildings; 20 mobile units were located on high school premises.[13]

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[7] Community Renewal Program Report, op. cit., p. 1.

[8] An Atlas of Chicago's People, Jobs and Homes, op. cit., p. 26.

[9] Ibid., p. 32.

[10] Ibid., p. 43.

[11] Ibid., p. 42.

[12] Ibid., p. 13.

[13] Chicago Board of Education, "Facilities Inventory: High School Buildings," Reported by the General Superintendent of Schools, Official Report of the Proceedings of the Board of Education of the City of Chicago (September 11, 1963), pp. 371-75. (in the files of the Board.)

If operated on an extended day of 10 periods, these facilities could provide for a maximum of 128,000 students at 28 students per classroom.[14] The actual capacity of the existing secondary school buildings themselves (exclusive of branches and mobile units) computed at the desired eight-period day and 28 students per class was 92,715 students.[15] For the 1963-64 enrollment to have been accommodated in regular high school plants (excluding branches and mobile units) under desired conditions (eight-period day exclusive of lunch, 25 per class), 1070 additional classrooms would have been required.

The ten years from 1953 through 1963, with the overall increase of 170,000 students from elementary through college level, witnessed the growth of the Chicago public school system by 4,801 new classrooms.[16] Viewed against this record of achievement, the dimensions of the demands of the school system in the years ahead, particularly in meeting the growth in high school enrollment, are evident. During this period, the average annual increase is projected at a figure in excess of 4,200 students per year, and it is now estimated that the peaks of enrollment in high school will be reached in three steps of approximately 12,000 additional students each between the years 1963 and 1966, 1966 and 1972, 1972 and 1974.[17]

Computing the classroom needs of these 35,000 anticipated new secondary school students at the optimum 25 students per class on a regular eight-period day, 1,400 new classrooms are required to accommodate these students at desired standards. Adding this shortage to the classroom shortage already quoted for 1963, the total number of new classrooms required to meet desired standards in 1974 is 2,500.

Some alternatives to expanding the building program at the secondary level are increased class size, additional mobile units, extended school days, or revision of the current practice of scheduling the teacher-student ratio on the basis of the standard five-period day. If expedient, a combination of these alternatives might be employed. However, if the long-range needs of the city are to be met, additional funds for new construction of secondary schools are obviously required.

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[14] "High School Facilities: Space Student Relationship, Ranked by Per Cent of Overload," Chicago Public Schools, September 17, 1963.

[15] "Facilities Needed to Bring High School Buildings Up to Desired Standards," Chicago Public Schools, November 1, 1963, p. 5.

[16] We Build: Ten Years of Growing, 1953-63, op. cit., p. 32.

[17] "High School Projected Enrollments," Chicago Public Schools, September, 1964.

To this end, the Board of Education in 1962 approved a five-year plan for the construction of ten new high schools. These ten new schools, each with a capacity of 2,000 students, would accommodate the 20,000 additional students anticipated over the next five years. But if the 40,000 students now enrolled above the desired capacity of current buildings are to be suitably provided for, additional buildings must be planned and built.

Utilization of School Buildings

The preceding data indicate that Chicago is faced with the problem of a burgeoning high school population. The question "What size should a high school be?" is not readily answered. The figure 2200 was suggested at one time as a desirable size for a city high school[18], but projected enrollments indicate that this figure cannot be maintained under present conditions of population growth in the city. The total high school population in September 1963 was 137,853. Seventeen high schools had memberships over 3000. The median size of Chicago high schools reached 2411 in 1963.[19]

Planning for ten new high schools was initiated in 1962. Until these new high school facilities are available, the expanding enrollment at the high school level must be cared for in the following ways: changing school attendance areas, using extended day schedules, using high school branches in elementary school buildings, changing the use of some buildings, increasing class size, using mobile units, or revising the scheduling of teacher-student ratio on the basis of the five-period teaching day.

High School Branches

The utilization of elementary school buildings as branches for the high schools is not a new idea in the Chicago public schools. In 1932, there were 48 high school branches with ninth grade units.[20] At the college level, available space in elementary and high school buildings has been utilized over the years when needed. In the school year 1960-61 there were thirteen high school branches; in 1962-63 there were 31; and in 1963-64 there were 34. The table on page 13 gives the number of high schools and branches in each school district of the city. Present indications are that the use of branches for high schools will continue until the increased student population can be absorbed through building construction.

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[18] Chicago, Board of Education, "High School Facilities, Yesterday, Today, Tomorrow: Progress Report," Reported by the General Superintendent of Schools, Official Report of the Proceedings of the Board of Education of the City of Chicago (May 8, 1963), p. 2227.

[19] Facts and Figures, op. cit., p. 23.

[20] Chicago, Board of Education, "High School Branches, Chicago Public Schools," Official Report of the Proceedings of the Board of Education of the City of Chicago (May 22, 1963), p. 2285.

It has always been the policy of the Board of Education to adapt existing school facilities to serve youth of the city. Prior to 1932, Chicago had used the junior high school organization. In 1924, four junior high schools were built. By 1932, twenty-nine had been built and a thirtieth one was planned. However, because of financial curtailment of the educational program in the thirties, the junior high school as an educational unit was dropped. Some of the existing junior high school facilities were adapted immediately to high school use. Thus, twelve high schools in present use were originally planned as junior high schools. Additions and alterations have enabled the buildings to be used for secondary school programs. However, these buildings are inadequate for a modern educational program in terms of space and facilities.

Of the remaining high school buildings, fourteen were originally constructed fifty or more years ago. Since 1950, six new high schools have been built, including one vocational and one upper grade center that is now being expanded into a four-year high school. To further meet the expanding high school population, seven additions to high schools were built since 1950.

Upper Grade Centers

The introduction of the upper grade center in Chicago in 1954 illustrates effective utilization of building facilities under the impact of population growth. An educational program was designed for seventh and eighth grade students in the upper grade center to provide for better organization of the school day, grouping for more effective teaching and learning, and the provision of services and opportunities that would not otherwise be available. In the current shortage of high school facilities, consideration might be given to the development of school units that would embrace grades seven, eight, and nine. Ninth grade classes in some instances might be assimilated into the upper grade structures so that desirable enrollments could be maintained. Units with adequate enrollments could thus be well staffed. Where feasible, elementary school buildings might be effectively utilized to contain units ranging from grades seven through nine. It is very important, however, that such units or branches provide full facilities for an adequate high school program.

Since teaching certificates in grades seven to twelve are offered in art, music, industrial arts, homemaking arts, and library science, teachers in these areas could be used in any year of the three-year level. Preliminary planning would provide for high school staff in English, mathematics, social studies, foreign language, and science. Ninth grade enrollment should be large enough to justify these positions on the staff.

Better articulation can be secured where the ninth grade student has the opportunity to be enrolled in a three-year unit and where he

Table 1

NUMBER OF CHICAGO PUBLIC SCHOOLS AND BRANCHES ARRANGED BY DISTRICTS

September 1963

District	Gen. H.S.	Br.	Voc. H.S.	Br.	Tech. H.S.	Br.	Elem. Sch.	Br.	UGC.	Br.	E&VGC.
1	3	1					18	4	1		
2	3	3					19	2			
3	2	1			1		17				
4[a]	2	5	1				22	1			
5	3	2					25	2			
6	2	2					21	1	2		1
7	1		3				17	1	2		
8	2		1	1			19	1	1	1	1
9	1						21	2	1	1	1
10	2	1					19	3	2		1
11	1	1	1				18	1	1		1
12	2	6					22	1			
13	1	2					20	8	3		
14	1		1				16		1		
15	4	1					19	6	1		
16	3		1				26	4	1		
17	3	3					19	5			1
18	3	4					24	9			
19	1	1					17		3		
20	1	1					10	1	3		
21	1				1	1	13	1	1		1

---

[a] Plus high school for physically handicapped serving the entire city in a centrally located building and hospital and home instruction classes.

advances directly from the upper grade center to the tenth year in high school. For all students the three-year unit at grades seven, eight, and nine offers continuity in learning; the able student in eighth grade can be challenged with work in such areas of the high school curriculum as foreign language, science, or mathematics. With this kind of building utilization, programs for able learners could be organized that would strengthen aspirational levels and increase academic motivation. Library facilities, physical education equipment, and shop facilities would be more adequate in a unit organized from grades seven through nine than those units now serving ninth grade only. Co-curricular activities would be broader and more challenging in a three-year unit.

New Buildings

Several new high schools and additions have been built in recent years which have incorporated promising design features. The construction of these buildings has increased community interest in the high school program. New high schools are Mather High School, 1958; Harlan High School, 1958; Bogan High School, 1959; John F. Kennedy High School, 1963; and Morgan Park addition, 1964.

These new fire-resistive structures provide for a flexible program of instruction through the utilization of building space and in the provision of multipurpose rooms. The location of physical education and auditorium facilities offers the community an opportunity to use the building in the evenings and on week-ends. The school-park plan is utilized at Bogan, Harlan, Mather, and Kennedy and provides for recreational activities within the high school campus location. Of particular importance in the building of a modern high school is the provision for science laboratory space, the design of the library as an instructional materials center, and the utilization of modern communications media within the building.

Job Opportunities

As the school population increases in Chicago, trends in the field of commerce and industry are also creating new conditions which vitally affect the schools. The rapid development of automated industrial production has created a shortage of jobs; the decline in the number of jobs by 1.2 per cent in the 1950's took place despite an accompanying 15.7 per cent rise in real output (adjusted for price level changes).[21] As one consequence of this trend toward even greater reliances on automation, Chicago's unemployment rate advanced from 4.8 per cent of the total work force in 1950 to 5.4 per cent in 1960. The national rate of increase in unemployment for the same period was from 5.3 per cent to 5.6 per cent.

Besides the rise of automation as a cause of fewer jobs, there has also been the steady exodus of industry from Chicago. In manufacturing, alone, Chicago lost 115,200 jobs from 1957 to 1962.[22] Despite this trend away from industrial concentration in the central core of the city, economic forecasters predict that manufacturing will continue to be the leading source of jobs in Chicago in 1980. Trade, wholesale and retail, now the second largest employer in Chicago, is expected to show a decline between 1960 and 1970. Any employment growth in the field of trade will be fostered by population increase, with more rapid job growth in the suburban ring, close to consumer markets.

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[21] *Community Renewal Program Report*, *op.cit*., p. 12.

[22] *Ibid*., p. 14.

Although manufacturing and trade offer less and less promise for making up the job shortage, there is an increasing demand for workers in the field of services. Between 1957 and 1962 the number of jobs in this area grew by 41,900 in the city of Chicago. This increase is expected to continue in the future.[23] The only other major growth in jobs in the city during the 1950-60 period was in the field of government where 39,200 jobs were added.

As the Chicago public school system keeps pace with trends in employment in its vocational education program, it might be well to concentrate in counseling in fitting students for employment in the services (repair shops, recreation, personal and professional service, advertising, and work in private institutions) and in promoting knowledge of job opportunities in civilian government agencies.

A factor closely allied to industrial changes within the Chicago limits is the effect produced on the assessed valuation per student in the public schools. For several years the assessed valuation per student for Chicago was steadily declined. In seven years, from 1955 to 1962, there was a 10.8 per cent drop from the 1955 figure of $22,055 to the 1962 assessment of $19,672 per student. Because of this drying up of a taxable wealth, the schools have a particular interest in current planning for urban renewal. A major item in the proposed urban renewal program for the city of Chicago in the next ten years is the redevelopment of the city's industrial environment so that the tax base essential to the city may be maintained.[24] Sixty million dollars of the proposed $300 million expenditure has been allocated to this effort. The major portion of the proposed program, $180 million of total expenditure, is planned for use in upgrading existing neighborhoods through major conservation projects. Thus 80 per cent of the $300 million proposed for urban renewal in the next decade is devoted to the refurbishing of the community wealth which the schools need if they are to remain strong in tax-based support.[25]

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[23] *Ibid*., p. 14.

[24] *Ibid*., p. 85.

[25] *Ibid*., p. 102.

Chapter IV

ORGANIZATION OF THE SECONDARY SCHOOL

Administrative Structure

The general high schools are comprehensive in nature and offer an educational program that is adaptable for all students. The special high school is one which offers a limited program, but in depth, for a particular subject area. The Chicago public schools have been committed to the philosophy of the comprehensive high school. Jones Commercial High School, a two-year business school at the eleventh and twelfth grade levels, is an exception.

The general high school houses a diversified student body and provides leadership opportunities for all students. The three types of high schools in Chicago are:

> the general high school, which provides a general education and develops special interests of a non-technical nature
>
> the technical high school, which provides an education in the subjects preparatory to college training in engineering and architectural drafting and an education preparatory for entry into positions at the subprofessional level
>
> the vocational high school which is considered to have as its purpose immediate employability of its graduates in skilled occupations.

The comprehensive high school with an enrollment of 1800 to 2200 would seem to best meet the needs of Chicago for the majority of the high school population.

In the Chicago public schools there are 42 general high schools with 34 branches. There are 8 vocational high schools, 1 high school for the physically handicapped, and 2 technical high schools.

Staffing. The median size of all high schools in September 1963 was 2411.[1] A high school of this size with a student-teacher ratio of twenty-four to one is staffed with about one hundred teachers. The staff typically includes three assistant principals, six counselors, two teacher-librarians, and the appropriate number of teachers in all subject areas to meet the standards set by the North Central Association of Colleges and Secondary Schools.

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[1] Facts and Figures, op.cit., p.24.

Administrators. The principal is the responsible administrative head of his school and is charged with its organization, supervision, and administration. In a high school of 2400 students, the three assistant principals work with the principal in the performance of their duties in clearly defined areas in the school. The administrative structure provides for the utilization of the assistant principals in the following ways: an administrative assistant, a curriculum assistant, and a counseling assistant.

Department Chairmen. The department chairmen in the high school aid in the organization and administration of their respective departments. They help inexperienced teachers. They conduct departmental meetings and have charge of textbooks and instructional supplies in their curriculum area. The chairmanship is a responsible position. A study and job analysis is needed to properly define this position. The variation in department size is a factor which must be considered as a matter of policy.

The Teacher. Since the teacher is the most important factor in education, staffing and the in-service education of teachers deserve special attention. With the increasing population at the high school level, it is essential that present recruitment procedures be continued and intensified. Secondary education demands well-qualified individuals for every area of the high school curriculum.

It is the responsibility of the principal to select and program teachers with appropriate abilities and experiential background for each class in the school schedule. The principal should recognize the individual differences among teachers. Some individuals are better qualified than others by experience, personality, and academic background to work at the ends of the continuum with the academically talented or less able students. Consideration should be given to developing "status" for teachers of low achievers and freshmen.

Some suggestions relative to achieving status for the teacher of low achievers are:

in-service programs
professional conferences
additional hours of service pay
attractive office and classroom space
additional professional opportunities
publishing of significant results of teaching in Chicago public schools publications.

An important factor in the in-service education of teachers at the high school level is the allowance of time and the careful planning for faculty and departmental meetings which have as their objective the improvement of professional competencies of the staff.

In order to provide for better utilization of staff, teachers should be encouraged to qualify in more than one teaching area. It is suggested that teachers with two certificates be advanced one lane on the salary schedule. Implementation of this recommendation will facilitate programming in schools and lead to greater flexibility in the utilization of the staff.

Since sponsorship of co-curricular activities enriches the teachers' professional competencies and contributes to the development of warm personal relationships with adolescents, the assumption of these duties and responsibilities should be allocated carefully in order to secure the maximum benefit to both teachers and students.

Teachers and principals of the Chicago public schools have availed themselves of the opportunities provided by fellowships for summer and year-round study granted by the federal government, private organizations, and business and industry.

The Board of Education has also provided a number of fellowships. Each summer, for the past five years, approximately twenty-five teachers recognized for their superior teaching ability and their service to children have been invited to study recent developments in their fields with outstanding scholars at universities outside the Chicago area. The only stipulation is that they share their learning upon their return to duty.

Length of the School Day

The length of the school day for students is nine periods. This includes eight assigned regular periods and a lunch period. A high school operates at normal capacity for a nine-period day. All facilities are available at the end of nine periods for co-curricular activities. The members of the faculty, except in some cases the athletic coaches and sponsors of special activities, have the same length of day.

In an overcrowded school, capacity can be increased by extending the school day. Thus high schools sometimes have a day of ten, eleven, or twelve periods. The eleven-period day provides the extra two periods necessary for shop or laboratory classes. However, since students are expected to be in school nine periods, extending the school day may provide more classes but it does not provide more facilities. Thus, during the middle of the school day when all students are in school, study halls must sometimes become classrooms and auditoriums become study halls.

Data Processing

Data processing has been used to program a high school in District 3 as a pilot situation since the spring semester of 1962. In September 1964, service will be extended to all schools in District 3: two general high schools and one branch; one technical high school, and 17 elementary schools. It will be extended to all public high schools in the city for membership data at this time. By September 1965, the entire school system will be involved.

The program of data processing will provide additional and more nearly accurate data for everyone in the Chicago public schools. It will relieve teachers of a substantial amount of clerical work. In high school, the time spent in programming will be considerably reduced. Data processing will save both time and money and, in the case of high schools, it will make possible a high degree of individual and specialized programming.

Chapter V

INNOVATIONS IN THE SECONDARY SCHOOL PROGRAM

In the explosion of both knowledge and population, as well as the shrinking of available funds for education, increased attention is being given to finding more effective and more economical ways for carrying on the educational process. It is both timely and urgent that there be more flexibility in organizing a school, staffing it, programming students, and scheduling teachers. Principals in the Chicago public high schools, as well as elsewhere in the nation, are being encouraged to explore new methods in programming and in organizing a school for teaching and learning.

The North Central Association Commission on Secondary Schools is currently making a concerted effort to encourage experimentation and innovation in member schools in order to keep abreast of national educational needs and trends. The aim of the Commission has been to assure member schools that, when a particular criterion seems to discourage implementation of an innovation or idea, an arrangement can be made to deviate for experimental purposes.[1]

Multiple-Track Plan

Although the framework of the Chicago public high schools has remained basically the same for the past ten years, the educational planning and implementation of ideas have been changing at an accelerated pace. Among noteworthy developments is the growth of the multiple-track curriculum.

The secondary school curriculum in the Chicago public schools in tailoring its organization to provide the best possible learning situation includes six levels.[2] These are:

Basic curriculum which provides for students with limited academic potential

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[1] North Central Association Today, VIII, (March, 1964), special issue.

[2] The classes offered at each track level are described in the Guide to Curriculum Offerings for the Secondary Schools, published by the Chicago Board of Education in 1961.

Essential curriculum which provides for the abilities of high school students who are below the average achievement level

Regular curriculum which provides for the abilities of the average student in high school

Honors curriculum which offers enrichment for students who are identified as academically able

Advanced placement classes which are college level and may be taken by eligible students during their senior year of high school

Educable mentally handicapped, programs of two years or more which are available to all students in EMH classes who are at least 15 years old and whose reading and arithmetic achievement is 4.0 or better.

Individual schools have made arrangements to provide for some young people in college level courses at adjoining city junior colleges.

The multiple-track plan is not a rigid, formalized structure. It provides that the student be enrolled in each subject area at the level where he can best achieve. A student might be in an honors English class, for example, and in regular mathematics and science classes.

Table 2 on page 23 indicates the extent to which schools utilized the diversified curriculum offerings at the higher levels.[3]

"100" Program

In addition to the honors and advanced placement programs, there is in the Chicago public high schools the "100" program, begun in 1958, which is for the top one hundred academically able students. Twenty-five top ability students from each grade level are assigned in this special program. The selection and programming of students are the result of multiple factors including achievement records, scores on standardized tests, and counseling with students and parents. The organization of the program is under the jurisdiction of the local principal.

Television Teaching

Television College, which has completed eight years of continuous operation, is a means of supplying enrichment opportunities to gifted high school students. A total of 54 students were enrolled for a pilot project which ran during the winter 1963 trimester. The evening lesson was aired from 6:00 to 6:30 p.m., three times a week, in order not to interrupt the study patterns of the students. Forty-five lessons were telecast. Thirty-nine high school students completed the course. Thirty-six earned A's or B's.

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[3] Chicago Public Schools, Program of Education for the Gifted in the Chicago Public Schools, Study Report Number Twelve, 1964 Series (Chicago: Board of Education, City of Chicago, 1964), p. 25.

The use of television teaching in the Midwest Program on Airborne Television Instruction and/or commercial programs contributes to flexibility in the learning situation, provides for utilization of cultural resources, and stimulates the high school instructional program. Its use is related to the local school situation, but it has many advantages. Among these are its potential for in-service education for teachers.

Table 2

NUMBER OF HONORS AND ADVANCED PLACEMENT CLASSES,
BY SUBJECT, OFFERED IN CHICAGO PUBLIC HIGH SCHOOLS
IN MARCH 1964

Subject	Honors Classes	Honors Telescoped Classes	CEEB A. P. Classes	City Junior College Classes
English	482	6	10	8
Mathematics	210	24	12	5
Science	172		10	1
Social Studies	180	1	15	
Foreign Language	44		1	
Business	4			
Art-Drafting	9			
Total	1101	31	48	14
Total Number of Classes				1194

Programmed Instruction

Another area in which the Chicago public secondary schools are experimenting is in the use of programmed instruction, which consists of the presentation of a subject in a definite sequence of short steps or "frames," each of which contains a question that the student must answer correctly before moving on. Such a sequence, known as a "program," may be administered mechanically by the so-called teaching machine or by the programmed text. The text is a workbook so designed that the student moves from frame to frame by simply turning pages. The communication processes resemble those of a silent Socratic dialogue. Future plans indicate continued close scrutiny of these materials and their use in the general classroom. Evaluation of this presentation of material will determine how extensive the future use of the programs should be.

Annual Admissions

Another recent change in organization is the annual admissions policy which was adopted by the Board of Education in 1961; it provides greater continuity in the educational program for all students. The full benefits will accrue to the high schools when the last midterm class is graduated in January 1967. This plan admits students to school only in September.

Advantages of the annual admissions plan for the high school are many. The plan:

provides for greater continuity in teacher-student relationships. The assumption is made that teachers in high school will keep the same classes throughout the school year. English I thus includes the two semesters of the subject taught under the direction of the same teacher. With the increasing enrollment at the high school level, this plan enables teachers to understand better the individuals in their classes.

strengthens learning since it provides for the continuity of instruction. The teacher is better able to adapt instruction more completely during the period of a year to meet the needs of the students in the class. It insures better attainment of objectives in each area of the curriculum by virtue of continuity of instruction.

increases the number of students and classes from which programs can be organized by administrators. It offers more flexibility for ability grouping in every area of the curriculum.

makes possible a continuous school organization that runs from September through June without interruption. In terms of programming at the high school level it saves considerable administrative and teaching time. Record-keeping of teachers is lessened, thus reducing the non-teaching duties of teachers. This is particularly helpful to the division teacher in terms of student accounting procedures.

strengthens evaluative processes. Course content can be adapted over a long span of time to meet the individual needs of students.

provides for better counseling of students, since organizational change is less frequent.

improves articulation with higher education. Many colleges and universities make their major effort to enroll new students for the fall semester. Scholarship grants are often predicated upon September entrance to college.

provides a school organization for the city that is similar to that followed by suburban and private schools. In this sense, it provides for better articulation of school organization within the metropolitan area.

New Ideas in Programming

With the critical need for space to accommodate more and more students, other methods of programming teachers are being explored. Experimentation in programming might increase the capacity of a building to accommodate approximately twenty per cent more students than presently, provided that the lunchroom, study halls, and general facilities are adequate. By exploring and experimenting, it may be discovered that there is no loss of learning in some subjects when classes are large. Typing classes, for example, might be scheduled to a room's capacity, maybe a hundred or more, and the teacher's daily schedule adjusted to produce the maximum number of students considered feasible for this subject.

With the many innovations in organization (such as team teaching) and the many new teaching aids and media (such as television, programmed instruction, tape recorders, filmstrips, and other devices), a student's daily schedule might be made not only more flexible but also more challenging. Consideration should be given to freeing more students at the eleventh and twelfth grade levels from required attendance in selected classes with the approval of their counselor. They might thus engage in independent study which might be arranged in smaller groups, with a teacher meeting the students periodically to stimulate and direct their learning. Independent study might also be scheduled to provide for the maximum utilization of library resources both in the school and in the community. As John W. Gardner has said:

> The ultimate goal of the educational system is to shift to the individual the burden of pursuing his own education. This will not be a widely shared pursuit until we get over our odd conviction that education is what goes on in the school buildings and nowhere else.[4]

If there is to be more flexibility in the programming of teachers and students, new building plans should continue to provide for even more flexible situations, such as larger rooms and relatively small rooms, individual study areas as well as the traditional classrooms and laboratories. These arrangements will facilitate flexibility in the programming of teachers and students.

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[4] John W. Gardner, Carnegie Foundation in Science, February 14, 1964.

Just as there should be flexibility in programming teachers and students and in the utilization of building facilities, so also should there be flexibility in establishing student-teacher ratios for a school. Where a school can develop a plan for working with educable mentally handicapped students and with those who possess many of the characteristics of the potential dropout by utilizing smaller class sizes, it should be able to do so without requiring other staff members to handle larger classes. More flexibility in high school organization should be encouraged so that the advantage found in the educational and vocational guidance centers, in the urban youth program, and in distributive education programs may be utilized to the fullest extent in the high schools.

Chapter VI

THE PROGRAM OF EDUCATION

The program of education in the Chicago public schools has been evaluated and revised on a continuing basis since 1957. The teaching guides in all areas of curriculum incorporate the best thinking, both nationally and locally, regarding the subject matter of the secondary schools. Curriculum in the Chicago public schools provides for continuity of learning from kindergarten through twelfth grade. Thus the science at the ninth grade level builds upon what has been learned earlier. The guides offer a structure in every teaching field which the instructor can follow and adapt. The review and revision of textbook offerings correspond to the cycle of curriculum evaluation. Thus the secondary school curriculum in the Chicago public schools both provides an incentive for careful instructional planning on the part of the teacher and ensures the students of the development of basic skills, concepts, and ideas that are essential for personal growth and relevant to the cultural heritage and to current social trends.

A review of present status of the secondary school curriculum indicates a wide range of subjects provided in grades nine through twelve in the Chicago public schools, a diversity of offerings in every field, and the depth and scope of achievement attainable. The impact of continuing innovations and the stimulation afforded by the involvement of university scholars in high school curriculum development affords an instructional program of increasing challenge to both teacher and students.

Curricular and co-curricular learning opportunities contribute to the student's competence in both the area of general education and in the area of special interests. The skills and understandings in the total program embrace all facets of communication and its adjunct, critical thinking. Understanding of oneself, of one's world, of the social structure, and of the cultural heritage is a continuing aim of the high school program. Because of the range of abilities and the differences of background in the student population there is flexibility in the choice of subject matter. The instructional program cannot be the same for all, for it is apparent that individuals do arrive at common understandings and learn basic skills through different avenues.

Continuous assessment of direction and achievement is necessary in a society with inevitable change. Nothing remains static for long. A good teacher, with effort and imagination, can meet forthcoming changes in education. The teacher provides for individual differences by making an early and continuous assessment of each individual's potential and adapting the program of learning to it. Thus a high school of excellence evolves.

The high school organization fosters innovation in its structural adaptations and in its provisions for experimentation. The environment of the high school is such that the individual teacher is able to offer each student an opportunity to develop and interact with others in a climate of intellectual stimulation.

Requirements for Graduation From High School[1]

In accordance with the regulations adopted by the Board of Education for graduation from the secondary school, students in high school should meet the following requirements[2] (applies to students entering February 3, 1958, and thereafter).

1. Four units of English[3] including:
    - (a) A three-year prescribed sequence plus
    - (b) A fourth year to be selected, with guidance, from the subjects offered by the local school which are appropriate to the achievement levels, abilities, and interests of of the student.
2. Three units of social studies, including:
    - (a) One year of United States history and government
    - (b) One year of modern world history or one year of world geography
    - (c) One year to be selected from the electives offered within the local school.

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[1] Chicago Public Schools, Guide to Curriculum Offerings for the Secondary Schools (Chicago: Board of Education, City of Chicago, 1961), p. ix.

[2] The requirements for graduation apply only to students entering high school on February 3, 1958, and thereafter. Requirements are not retroactive.

[3] The terms credit and major are used interchangeably. Two credits or two majors equal one unit.

3. Three units of mathematics and science to be selected as follows:

   (a) Two years of mathematics plus one year of science

   OR

   (b) Two years of science plus one year of mathematics. The courses selected in either area are to be determined in accordance with the student's achievement levels, abilities, and interests.

4. One-half unit of art and one-half unit of music

5. One unit of health, safety, and physical education

The required units are selected from the appropriate track on the multiple-track system. Thus two units in mathematics could be:

two years of essential mathematics OR
one year of basic mathematics and one year of essential mathematics OR
one year of essential mathematics and one year of algebra OR
one year of algebra and one year of geometry.

Each combination at present satisfies the mathematics requirement.

The multiple-track system, in the Chicago public schools, includes five tracks: basic, essential, regular, honors, and advanced placement, plus a sixth for the educable mentally handicapped youth. Placement in the appropriate level is determined by the school and is based upon the student's achievement and potential ability. The program is flexible to permit the student to transfer from one sequence to another upon approval of the principal when a change in student achievement makes such a transfer seem advisable.

The Holding Power of the Schools

The holding power of the Chicago high schools has increased as a result of intensive efforts on the part of the Chicago public schools to provide every student with the opportunity for an education. Innovations in school organization, curriculum, and counseling have contributed to the steady increase in the number of students completing the four-year program of the high school. This growth has occurred at a time when the high school student faces the challenge of a more vigorous academic program. Every student must complete a sequence of studies requiring four years of English, three years of social studies, and a sequence of two years in mathematics and one in science or two years in science and one in mathematics, and he must meet the required sequence depth for graduation.

In 1954-55 the total high school population was 102,377. The voluntary dropout rate was 8.4 per cent; the involuntary rate was 5.0 per cent. In 1962-63 the total high school enrollment was 130,734. The voluntary dropout rate was 6.9 per cent and the involuntary dropout rate was 3.7 per cent. This decelerating trend in the rate of high school dropouts, both voluntary and involuntary, has been consistent since the 1954-55 school year.

English

English grammar, composition, reading, and literature are the four areas of the language arts curriculum in which content and teaching methods have undergone considerable change in the past decade.

The trend in the study of English grammar in the Chicago public high schools, as is true across the country, has been away from emphasis on traditional formal grammar and toward a linguistic approach. In essence, the new grammar stresses examination and description of the structure of the English language as used in literature and by educated laymen. In contrast to the traditional prescriptive grammar, descriptive grammar does not presuppose that proficiency in English usage can be acquired by the mechanical application of a set of grammatical rules to which the language is supposed to conform. The lack of correlation between such prescriptive grammar study and language proficiency has, in fact, been demonstrated many times. Accordingly, there has been some shift away from the older methodology which focused attention upon nomenclature drill, rote memorization of rules, and extensive diagraming of sentences. The new grammar approach is designed to be a functional one.

Current practice in the teaching of composition more nearly conforms with the methods of descriptive grammar than does prescriptive grammar study. Increasingly, there is writing and rewriting, with critical comment by the teacher in place of drill books and exercises in traditional grammar. Dr. James B. Conant's recommendation in The American High School of a theme a week and teacher-student conferences constitutes a further step away from overreliance on traditional grammar study as an aid to effective written expression.

In the summer of 1960, eighteen members of the Chicago teaching staff attended a six-week program at Rutgers University for the purpose of exploring more effective ways of teaching English. There was,in the school year 1960-61, a grant from the Fund for the Advancement of Education which provided for the purchase of books and employment of theme readers in some Chicago high schools. This practice has been continued on an experimenting basis and is promising in the teaching of composition. The selection and supervision of theme readers is important in each high school if the program is to articulate successfully with the goals of the classroom teacher. Provision for frequent conferences between the teacher and the theme reader is necessary in order to secure maximum results.

Probably the greatest single help was the reducing of the total number of students taught by any one teacher of English from five classes with a total membership of about 180 students in 1957 to a total of 125 students.

Trends in the field of reading in the Chicago public general high schools have been in the direction of more accommodation for individual differences. Special materials for various reading levels are increasingly available and more extensive ability grouping has been adopted. Developmental reading, widely used, is defined as a program to meet the needs of readers at every level and move them forward. It sets such objectives as determination of reading purpose, adjustment of speed to difficulty of material, vocabulary extension, location and recall of main ideas and important details, and the distinction between fact and opinion.

In the Chicago public high schools, reading centers offer special help to both disabled readers and to the collegebound who wish to increase their proficiency. In conjunction with the reading centers, a great variety of technical equipment has been used, such as the tachistoscope and reading pacer. Moreover, the practical needs of students in respect to reading as a study tool are being emphasized in each class through appealing to adolescent interests in reading; varying classroom reporting activities by the incorporation of drama, pantomime, and other spontaneous oral activities; and encouraging student cooperation in setting individual reading goals. A greater degree of self-direction continues to be sought through independent activities in reading in which the student has access to materials and equipment and, as we look ahead, to a place for study in an individual carrel.

Far more rich resources of an audio and visual nature are now available for the teaching of literature in the Chicago public high schools than was formerly true. The use of tapes and overhead projectors, as well as films, filmstrips, recordings in the teaching of English, and a wide variety of paperbound books or reprints have increased the scope of activities utilized in the teaching of literature. Continuing and increasing stress on world literature and contemporary literature indicates that the teaching task in English requires more extensive college preparation on the part of the prospective teacher.

Team teaching has been explored in a variety of ways in many English programs in the Chicago public high schools. The approaches vary, but all stress flexibility in student scheduling and better utilization of staff. A successful approach has been one in which a large group is scheduled for instruction in literature and subsequently divided into smaller units for small group instruction in composition and in language. Effective utilization of staff results, since the literature teacher is a specialist in that area and the composition teacher is strong in that field.

In the areas of grammar, composition, and reading the current trend is toward greater utilization of the tutorial function of the English teacher with many diverse materials and techniques being used. The trend leads away from reliance upon the supervised acquisition of prescribed textbook fact and theory. Thoughtful individualization of instruction is a developing trend in all areas of English. This trend could be implemented in the future at the eleventh and twelfth grades by smaller class size permitting individualization and the encouragement of independent study and a greater degree of self-direction.

A need exists both in the nation and in the city for greatly improved preparation for more teachers of English. The present program of preparation at the college level for future teachers who are English majors should be strengthened so that the secondary school English teacher may be more adequately prepared in language, literature, and composition. A strong faculty in the individual high school is achieved when there is a balance in the special abilities and depth preparation among teachers. Effective utilization of staff in the English department through team teaching arrangements can usually overcome imbalance of any kind.

Foreign Language

Foreign language instruction has undergone dramatic and fundamental changes within the last decade. The impetus for these changes was the increased awareness of Americans that the primary aim of learning a foreign language is to make contact with those for whom the language is a mother tongue. The shift in goals in foreign language teaching from a primary emphasis on grammar and translation to a primary emphasis upon the ability to understand and to speak the language has resulted in new teaching methods and techniques. Improved materials and equipment have been developed to aid in the implementation of these new methods.

Prior to 1958, available materials indicated a book-oriented approach to language learning. There were few recordings and cultural films which could be used effectively in a sequential program of instruction.

There were no Chicago public schools courses of study for any of the foreign languages nor, as far as review of the records can reveal, had there ever been any. In 1957 a committee was formed, through the Curriculum Council, to develop appropriate foreign language curriculum guides. These were developed as grades K-6, 7-8, and 9-12 guides for French, German, Italian, and Spanish; they were ready for distribution early in 1959. These guides advocated the audio-lingual approach which is in keeping with the national trend and presented materials based upon the new philosophy. The program involved the use of coordinated, multi-sensory, integrated materials. At that time few of the appropriate materials were commercially available; the Chicago public schools program and the growth of others across the nation together with the promise of available funds through NDEA encouraged the production of needed materials.

A statement of policy was developed in 1959, indicating among other points that the goals of the program in priority order were listening comprehension, speaking, reading, and writing; that the program required continuity, depth of study, and qualified instructors.

The National Defense Education Act, Title III, was coincident with the growing interest in foreign language teaching in our Chicago public schools and in the nation. The equipment and materials procured through the assistance of NDEA funds to implement the curriculum have been a great aid in helping the teachers to improve the teaching of foreign language in the Chicago public schools.

The growth in the foreign language program in the Chicago public schools was also given impetus by the Chicago City Junior College through its credit courses in foreign languages on the Television College. The Chicago Teachers College North and South now have language laboratories and have been emphasizing the latest techniques and in-service training for foreign language teachers.

The Chicago Public Schools Policy Statement on Foreign Language Instruction developed in 1959 was revised in 1962. This policy statement continued to emphasize depth of study, continuity, articulation, and a qualified teaching staff as the fundamentals of a successful foreign language program. Among other valuable contributions, the policy statement has been vital in firmly establishing foreign language instruction in the elementary schools, particularly in terms of continuity and depth of instruction. Prior to this time foreign language instruction in elementary schools had tended to lack unity and direction.

Since 1959, purchases of foreign language supplies and equipment, under NDEA, Title III, have been made in relation to the educational plan to implement the curriculum of the Chicago public schools. A review of the materials and equipment purchased reveals the continuing reevaluation and the deeper understanding of new procedures in language teaching.

The 1963 Annual Report of the General Superintendent[4] states that the reimbursement for foreign language under NDEA, Title III, for 1960 to 1963 was $200,082. This would indicate an actual expenditure of over $400,000 including the amount of Chicago public school funds spent. A large proportion of this amount has gone into the construction of language laboratories in selected schools. These laboratories have made possible a more advanced type of language instruction thus creating a need for an advanced type of supplies and equipment in the teaching of foreign languages. The language laboratories feature a teacher control-console, containing tape recorders and phonographs.

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[4] We Build: Ten Years of Growing, 1953-63, Annual Report of the General Superintendent of Schools (Chicago: Board of Education, City of Chicago, 1964), p. 40.

Tape selections and records can be channeled selectively to individual students, small groups, or the entire class. Twelve laboratories in various sections of the city have been installed, three are in the process of being installed, and four more are being planned for 1965 installation. The laboratories have generated an increased interest in foreign language instruction. Whereas not all schools have fully equipped language laboratories, every high school and elementary school offering foreign languages has been provided with at least one mobile language cart. These mobile carts include a tape recorder, record player, filmstrip-slide projector, jackboxes, and headsets.

The tape recorder is the basic piece of electronic equipment essential in language instruction. The recorder makes it possible to bring a variety of authentic native voices into the classroom. A student may make a recording in order to hear himself and to improve his speech.

Audio materials are of primary importance in the teaching of language for they are instrumental in developing acuity in hearing, accuracy in imitation, and accuracy in reproduction. Tape recordings and records are carefully correlated with other instructional materials. Basic materials follow a pre-planned learning progression and supplementary materials are provided to enrich the curriculum.

Visual materials also are valuable in the teaching of foreign language. They may be used as stimuli to elicit conversation and can be integrated with audio and graphic materials. Visuals are also used to convey accurate factual information and to provide a basis for cultural studies, an important phase of foreign language study.

During 1963-64 the curriculum guides for French, German, and Spanish were completely rewritten. The new guides continue the use of the audio-lingual methodology; they have been developed in two volumes, K-6 and 7-12, for French and for Spanish; a German guide, 7-12, has been completed. Each guide has a set of tapes, recorded by native speakers, for use with the guides as well as a set of visuals for use in stimulating situation conversation. In addition, the French guides have sets of color slides which were taken in France.

Most of the new materials and equipment for the teaching of foreign language have come through the expenditure of funds as part of NDEA, Title III. This was done in order to get the necessary amount of excellent materials, appropriate to the goals and methods of the program, into the schools at the lowest cost to the Board of Education.

The new materials and equipment are evaluated by a committee of principals, teachers, and foreign language consultants.

The foreign language consultants assist the teachers of foreign language by demonstrating the new materials and equipment, by acquainting teachers with the new methodology, and by helping in the articulation of the elementary and high school programs. In addition, the consultants keep the teachers informed of in-service courses and workshops being offered in the Chicago area.

Mathematics

In August of 1957, a committee, which had been formed to review the requirements for graduation from high school, recommended that three years of mathematics and science be included in the requirements. The three units were to be elected as follows:

two years of mathematics plus one year of science

or

two years of science plus one year of mathematics.

The courses selected were to be determined in accordance with the student's achievement levels, abilities, and interests.

For some years previous to the report of the 1957 secondary school committee, no mathematics had been required for graduation from the Chicago public high schools. Earlier in 1957, however, a teaching guide for mathematics containing an outline program for kindergarten through junior college had been published. The last revision of the teaching guides for high school mathematics prior to 1957 had been in 1943. The mathematics offered for grades 9 through 12, in the 1957 publication provided a two-year sequence for the non-collegebound student and a four-year sequence for the collegebound student. For the students who would terminate their formal education when they left high school, the two-year "essential mathematics" program was provided. This program included the mathematics needed in the daily living of the average individual. The courses offered for the collegebound students were the traditional courses of algebra, geometry, and trigonometry. In both sequences, related activities were given for each unit; this was an attempt to give the more able students an enriched program.

During the school year 1957-58, a new committee reviewed the 1957 teaching guide in order to comply with the secondary school report recommendations, one of which indicated that equal opportunity and identical opportunity are not the same. Thus it was in the 1958 revision that a complete program was made for the more able or honors students, as well as for both the average and the students who learn at a slower pace. Both enrichment and acceleration opportunities were offered for the talented: the honors program provided enrichment and contained modern mathematics concepts and approaches; the advanced standing program provided the equivalent of a five-year accelerated program for the mathematically talented. The excellent four-year program for the average student continued to be provided; and in addition to the two-year essential mathematics program, a special program in basic mathematics skills for the slower learning youth was provided.

Two trends were apparent in the content of the honors and advanced placement programs: one to modernize the program and the other to provide an accelerated program. Mathematics is an area of expansion and change. With the many new discoveries in science, both more mathematics is needed and better ways of teaching the basic skills and the new concepts are needed.

Much experimentation has taken place and is still going on to determine what concepts should be taught and how they should be taught in our high schools. In 1960-61, many of our high school classes were part of a national experiment to determine the effectiveness of the modern mathematics courses developed by the School Mathematics Study Group. In 1962-63, an experiment involving the School Mathematics Study Group mathematics program, the University of Illinois Committee on School Mathematics materials, and Chicago public schools honors programs was undertaken with our high school students.

In introducing modern mathematics into the teaching guides, it became apparent that teachers needed some in-service training and the new methodology required more visual aids. In 1959, the National Defense Education Act under the provision of Title III made the purchases of supplies and equipment for mathematics possible. Participation in the NDEA program coincided with the emphasis in the curriculum guides upon the "new" mathematics. It provided an increased opportunity to acquire many models including three-dimensional devices to reinforce the teaching of mathematics. A coordinated educational plan was developed for the acquisition of supplementary materials to implement the content and methodology in the curriculum. Experimentation could now be coordinated and administered centrally and the results be put into effect on a systemwide basis. Individual schools continued to identify their special needs.

The greatest emphasis, both in number of items and in total expenditures secured, has been in the area of visual aids and manipulative materials. This is as would be expected because of the emphasis in modern mathematics on understanding and discovery. Since 1959, a total of 72,516 manipulative materials and visual aids have been purchased for a total expenditure of $300,656, not including filmstrips and films. A total of 2,016 filmstrips at a cost of $49,234 and of 338 films at $34,410 have been purchased on the NDEA, Title III, program. Other items of significance, in relation to the teaching of mathematics, have been the purchase of 144 opaque projectors at a cost of $34,106 and 25 overhead projectors at $6,783.

In-service training programs to prepare experienced teachers to teach the modern mathematics concepts have been given a great deal of consideration. Our Chicago Teachers Colleges and all of the local area universities, offer courses in the teaching of modern mathematics for both the high school teacher and the elementary school teacher. Two-week workshops which combine content, methods, and the development of materials for use in the classroom have been provided during the summer months. Fellowships for summer and for year-round study have been granted by the federal government through the National Science Foundation and other organizations. Every effort has been made to encourage teachers to enroll in university courses and in workshops, and to apply for these fellowships. Many teachers have done so.

For the last four years, unusual opportunities for in-service education have been provided through fellowships for summer study approved by our Board of Education. Each summer some teachers, through their fellowships, elect to take courses in modern mathematics under outstanding mathematicians at universities throughout the United States.

Workshops in the presentation of modern mathematics concepts have also been provided in schools at the district level. These opportunities, too, have been utilized by many teachers.

In our world, changes are constantly taking place; our teaching guides must keep pace with these changes. A four-year cycle is used for the updating and revision of the content taught. The guides of 1958 were reviewed in 1961-62 and the revised guides were used as field test copies in 1962-63. Comments from teachers who had used these guides for one year and suggestions from university consultants who reviewed the field test copies were used in the final editing of the curriculum guide for high school mathematics, for both the regular program and the honors and advanced placement program, published in 1964 and now in use.

Experimentation in the use of modern mathematics in the essential and basic classes is in progress. On the basis of the evaluation as of this time, it now appears that curriculum guides for these areas should contain the modern mathematics approach and concepts when they are revised.

Thus curriculum guides for the mathematics program in the Chicago public high schools are kept up to date on a four-year cycle, utilizing evaluation by the teachers who are using the guides, current research in the field, other new developments in teaching mathematics, and suggestions from university consultants.

Science

The science curriculum in the nation and in the Chicago public schools has been continuously reexamined since 1957. Both nationally and locally there has been increasing concern for the development of a strong secondary school program which would articulate well with the elementary and college program.

In 1957, the staff report on Secondary Education was adopted by the Board of Education, a report which changed high school graduation requirements. Consequently, the total science program was reviewed and plans laid for the writing of supplements to the Teaching Guide for Science. The plan followed was a spiral development of concepts with increased depth and breadth at each succeeding level.

Separate volumes were produced for the areas included in the K-12 program: K-3, 4-6, 7-8, General Science, Biology, Chemistry, and Physics.

A much greater emphasis was placed upon the teaching of science at all levels in 1959 with the distribution of the supplements for K-3, 4-6, 7-8, chemistry, and physics. General science and biology guides were distributed to teachers in 1960. This was the first biology guide issued here since 1938. The availability of guides to cover the K-12 science program was prior to the issuance of science materials from most national studies.

Matching funds from the NDEA, Title III, aided and hastened the implementation of the new science curriculum. Increased time allotment for elementary science, which designated a weekly minimum of 50 minutes in the first grade and a maximum of 300 minutes in the eighth grade, gave impetus to the program.

The underlying values of the science program are the development of scientific concepts useful in understanding our natural environment, problem-solving skills, and the habit of thinking scientifically.

Building upon the background developed in elementary science is a three-track program available to every high school student in relation to his ability. Those academically able students who have an adequate science background can place out of general science and enroll in biology at the ninth grade. They may then take chemistry and physics in their sophomore and junior years and enroll in an advanced placement science (biology, chemistry, or physics) in their senior year.

With minimum requirements of three years of mathematics and science, two of one and one of the other, the average high school student elects biology in the tenth grade. He usually follows this with chemistry and/or physics.

Academically less able students study general science in ninth grade and may elect to follow it with either essential biology or a year of physical science, or both. Thus every student has available to him a three-year sequence in science.

In addition to the traditional science courses, twenty-one of our general academic high schools (46 per cent), with faculties who have had the appropriate special training, offer experimental science programs. These include: P.S.S.C.; B.S.C.S. (Blue Version Biology); B.S.C.S. (Yellow Version Biology); Chem Study Materials; Chemistry Bond Approach; Junior High School Science Project (Princeton Study). Under a grant received from the Atomic Energy Commission a program in nuclear science under specially trained teachers is offered. The purpose for our grant (along with one to the Los Angeles schools) is to determine the appropriate high school level for teaching nuclear science.

A separate grant to our Chicago Teachers College North supports a program in nuclear science for training teachers during an extended day institute. As teachers complete this training the nuclear science program may be made available to their students.

Other science programs in which our students regularly participate are:

astro-science workshops conducted on Saturdays at Adler Planetarium under the sponsorship of the Chicago Planetarium Society for thirty specially selected students

Holiday Science Lecture Series at Chicago Natural History Museum under a grant from the American Association for the Advancement of Science which attracts from 400 to 600 of our students each year

summer science seminars at Chicago Natural History Museum in biology, earth science, and anthropology

Tri-County Student Conference sponsored annually by the Chicago Heart Association which promotes the writing of a scientific paper covering research done by a student (University of Chicago personnel along with members of our faculty serve as resource people to participating students.).

The following factors contribute to the improvement of the science program:

1. Consultant help to schools -

   workshops at the district level
   workshops at the school level
   consultation with individual teachers

2. In-service summer institutes for elementary teachers held at Chicago Teachers College -

   primary science, summer of 1963
   intermediate science, summer of 1964

3. Meetings of individual district science committees to coordinate the science program within that district

4. Local school science seminars

5. Local school science clubs

6. Equipping of every elementary school with mobile science demonstration tables and science materials needed to implement the activities called for in the science guides

7. Installation of science laboratories and pupil project rooms in each newly constructed upper grade center

8. Modernization of high school science laboratories following a priority list based upon existing need to include -

   installation of pupil project rooms
   teacher preparation rooms
   since 1963, at least one laboratory in each school equipped for advanced science use in biology, chemistry, and physics.

9. Fellowships offered to our teachers each summer by the Board of Education to encourage teachers toward academic self-improvement

10. The periodic revision of our curriculum guides every four years which includes appraisal by science teachers, review of the city-wide evaluation by a curriculum committee, and critical review of the revised curriculum guides by nationally renowned college science specialists

11. Selection by committees of principals and science teachers of those materials used in science instruction -

    textbooks, reference books, auxiliary materials
    science supplies and equipment
    audio-visual materials

12. The National Defense Education Act, Title III, which has shared with the Board of Education since 1958 the cost of the continually increased and improved science materials made available to teachers in our system

13. Availability of television teaching -

    closed circuit in four schools
    MPATI in twenty-seven schools (at least one school in each of the twenty-one districts)
    programs on WTTW and educational television programs of importance produced by the commercial television stations available to every school

14. Local, district, and city-wide science fairs which continue to be outstanding every year and to provide incentive for independent projects

15. Innovations in instruction which include science seminars at summer school for the gifted, science seminars as co-curricular activities in the third and fourth year of high school, and team teaching arrangements

    New during the summer of 1964 was a National Science Foundation, University of Chicago, and Chicago public high school mathematics-

> science program involving high achieving or potentially high achieving students from nine of our high schools, some in culturally advantaged areas and some in culturally disadvantaged areas. These students (most of whom, according to the University of Chicago professor who is directing the project, performed at a first-year college level during the first summer of the program) will have special programming in their home schools during 1964-65 and will return to the University next summer. A major goal of the program is the encouragement of students in culturally disadvantaged areas to raise their sights and to pursue scientific endeavors vocationally.

Promising developments in secondary school science throughout the nation include the earth science movement, the physical science course in which physics and chemistry are integrated, and the history of science case approach which emphasizes historical development in science teaching. Careful attention to these developments and our involvement in them seems appropriate.

Social Studies

The social studies, more than any other area of the school curriculum, impart that knowledge which will help to carry forward and enrich our American society. In the present world, however, a knowledge of the origin and development of our own western culture is not sufficient. Today, international understanding requires the objective study of political, economic, and social systems which are unlike, even opposed to, those of the United States. The social setting therefore is an important factor in determining what shall be taught in the area of the social studies. This is an era of many and rapid changes, all of which are reflected in the social studies curriculum.

The first change evident is contraction of space and time. This has necessitated including in the social studies curriculum of the Chicago public secondary schools materials that are an indication of the international dimension of education. It is essential that students understand the various peoples of the world, for knowledge of their diverse value systems and diverse ways of life will provide potent tools for analyzing and understanding all human behavior. Therefore, in accordance with the regulations adopted by the Board of Education, all students entering February 3, 1958, and thereafter, to be considered as candidates for graduation must meet the following three-year requirements in the social studies:

one year of United States history
one year of the modern period of world history or one year of world geography
one year to be selected from the electives offered within the local school.

Such a social studies program is intended to provide the knowledge and skills necessary for informed and active citizenship in the United States of America. The program is also intended to present to each student the opportunity to develop the knowledge of the physical aspects of the world and the ways in which such factors as climate and topography affect the lives of people in various regions of the world. Furthermore, such a program offers to young people the knowledge and understanding of how groups of people have developed social institutions suited to their needs and have solved many problems to produce their cultures and civilizations. It is vital that students understand the cultures of people with whom, due to the contraction of time and space, they may be brought into contact in the interdependent world of today.

A second change in society which is reflected in the social studies curriculum is urbanization. This is an age of great mobility within the nation and of continuing migration from farm to city. Seventy per cent of the American people today live in urban communities. Therefore, considerable stress upon urban living is desirable in the social studies curriculum. It is emphasized in high school courses in Chicago in community civics, United States history, and contemporary American history. The content of these courses shows the changes brought about in the American way of life due to urbanization.

A third change in society which is reflected in the high school social studies curriculum is the growing importance of economic issues. Since the world's resources are insufficient to satisfy all wants, the study of economics is essential to the general education of all people. Each member of our society makes economic decisions throughout his life. Voters are called upon to vote on economic issues in practically every election; in this way they are helping to decide problems involving the economic welfare of all people.

In teaching economics it is essential not only to give students valid information regarding our economy and that of other nations, but also to develop within them skills of analysis. No one knows nor can anyone predict with a high degree of accuracy what social and economic problems will confront today's students twenty years hence. Since one objective of the social studies is to prepare future voters to think intelligently about the problems of their time, the analytical approach is indispensable to effective citizenship in assessing many of the most pressing public issues of the day.

A fourth change in society which is reflected in the social studies curriculum is the cold war. The most serious threat to world freedom is the ruthless communist effort to spread throughout the world its ideology. This danger has led to placing more emphasis upon the comparison of the United States of America--its government, economy, culture, and foreign policy--with the Union of Soviet Socialist Republics and its government, economy, culture, and foreign policy. Today seven states have laws requiring teaching about communism; fourteen states have recommended units or courses of study in communism; sixteen states are currently preparing such courses of instruction. Much of this has resulted from the Korean War, when those Americans who defected to communism said that they would never have done this if they had been educated as to the relative merits of communism and democracy. Thus students must have the opportunity to study and see the difference between the alluring promise and enslaving practice of communism. We need to understand the world struggle, but we can best come to know both the challenge and the appropriate response through sound education processes. An informed people may be freedom's best defenders. The Chicago public high school social studies curriculum is designed to help students develop understanding and ability to think and to arouse within them a curiosity for truth. We have faith that freedom will prevail, but we must give meaning to our faith by understanding the efforts necessary to maintain the cause of freedom.

To handle such a controversial subject as communism, to insure that such instruction will be accurate and constructive, and to insure that the classroom does not provide an opportunity for special interest groups, a unit titled "The United States and the Union of Soviet Socialist Republics: A Comparative Study" is included in the course in contemporary American history. This course is taught in the senior year after students have completed a course in world geography or modern world history and a course in United States history.

Curriculum guides for every subject and grade are available to every teacher in every school. These guides are revised every four years; in this way, the curriculum is kept up to date. Provisions are made in the guides to meet the various needs, interests, and abilities of all students. Honors classes and advanced placement courses encourage academically talented students. Students who are academically less able are offered special help and provided activities within their range of ability and scope of interest.

All of the recent trends in the social studies curriculum require an abundance of instructional materials, for students must learn to search for and evaluate various viewpoints. The textbook-only approach is no longer adequate in the social studies when reading materials are increasing at a geometric ratio. As James Madison, our fourth President, said, "A popular government without popular information or the means of acquiring it is but a prologue to a farce or tragedy, perhaps both." In the Chicago public high schools, the development and use of timely materials is promoted. Paperbacks and the adoption of more than one text help to keep material up to date. Monographs are available and are an important part of social science instruction.

To help teachers make teaching more effective and to strengthen teacher preparation in the social studies, the Chicago Board of Education through its fellowship program made it possible during the summers of 1961, 1962, 1963, and 1964 for teachers to attend study programs offered outside the Chicago area. Such opportunities contribute to the improvement of the social studies program in the individual schools.

Art

Art education in Chicago is a part of the required curriculum from kindergarten through high school. Chicago's public secondary schools have one year of required art--40 minutes a day, 5 days a week, for 40 weeks. In the newly created art curriculum, all activities are based on developing design problems in the art processes merged with the teaching of the history of art. Students come from the required elementary sequential art program to high school art classes with a wealth of information and a sound working knowledge of design in the art processes. All high schools have a three-year art elective program, meeting ten periods a week and emphasizing depth in learning. Twenty-one art supervisors work continuously to upgrade the quality of the program through offering workshops, demonstration teaching, and individual help for teachers. An art program of this scope indicates that we believe all students are creative, and that, therefore, art is important to the total educational experience of every child at all grade levels.

District art expositions as large in scope as most city-wide exhibitions are held each year in every school district. All of the schools in the district are represented through exhibits, teacher-student demonstrations, and panel discussions. All schools have art shows and programs throughout the year. In addition, many city-wide displays and events are held, often in cooperation with various business and civic agencies.

In February 1964, the new Junior Museum of the Art Institute of Chicago opened its doors to the young people of our schools. This beautifully designed museum within a museum affords young people of all ages the opportunity to see the art history phases of our activity program in art processes come alive. Last year thousands of children from every school district participated in our new city-wide art museum visitation program. A large group of staff assistants have been especially trained through several 12-week courses conducted by the directors, curators, and professional staff members of the museum.

A great honor was awarded our students when we were invited by the trustees of the Art Institute of Chicago to show student work in the vast area of the world-renowned East Wing Galleries. "Your Children's Art Exhibition" was a visual presentation of the total art program, kindergarten through high school.

Although special classes in the summer schools for high school students gifted in art have been offered for several years, in the summer of 1964 "Light, Color, Structure - An Action Seminar in Art" was offered to 80 nominees from every high school in the city. This action seminar was located in the Institute of Design of the Illinois Institute of Technology with a teaching task force composed of over 35 people who are directors, supervisors, professional art school staff members, artists, graduate art education students, and art museum staff members. The cultural resources of the city were explored through day-long field trips to museums. For eight weeks, five hours a day, individual students concentrated on developing design problems on a massive scale in many art processes.

The program in art in the Chicago public high schools continues to nurture creativity in every student, to guide them in growth in appreciation of the great art of the past and present, to enrich their working knowledge of design in the art processes, and to enable them to feel secure in enjoying art as a way of life.

Music

The program of music instruction offered at the high school level can be divided into two broad segments: one consisting of consumer-oriented courses designed primarily for all high school students--for both the talented in music and those not so talented, and the other providing opportunities for developing performing skills in either vocal and instrumental music as well as more specialized courses for musically talented students.

The curriculum guide developed for Music I and II, courses required of all high school students, places considerable emphasis on the development of basic skills and attitudes that will contribute to the musical growth and development of the student. Emphasis is placed on active participation in musical performance as well as directed listening to a wide variety of music both live and recorded.

The musical resources of the city have been tapped to make students more aware of the many musical opportunities that Chicago affords. In 1963 the Lyric Opera Company, with the financial assistance of the Junior Association of Commerce and Industry, presented its first special performance for the high school students. The response was extremely gratifying, and two performances have been scheduled for 1964. The Chicago Symphony Orchestra presented two concerts in high school auditoriums in the spring of 1964 as well as a special concert at Orchestra Hall for high school students. Again, student response was excellent. Instrumental ensembles provided by the Chicago Federation of Musicians have demonstrated and performed for high school music classes. These have not been limited to the more traditional groups but have included lecture demonstrations by jazz musicians.

The level of excellence achieved by individual high school performing groups has been demonstrated at the annual choral and instrumental competition-festivals. In 1964, thirty-seven groups received superior ratings. In recent years, greater emphasis at these interschool activities has been placed on critical listening and evaluation of performing groups by participating students. Each choral festival also included several selections for combined choruses.

In order to provide additional opportunities for musically talented students, an all-city high school band and chorus were organized in 1963. These groups, composed of selected students from high schools throughout the city, rehearse on Saturday mornings throughout the school year. The all-city high school chorus and band culminated their first year of activity with a concert at Orchestra Hall in June. The all-city high school chorus also performed on several occasions with the Chicago Symphony Orchestra presenting the midwest premiere of Howard Hanson's "Song of Human Rights."

A program to provide scholarships for musically gifted students was initiated in 1964 in cooperation with the Union League Civic and Arts Foundation. Ten students selected by the Division of Music were awarded scholarships entitling them to a year of private study at an accredited music school during the 1964-65 school year.

A greatly expanded summer program of instrumental music was initiated in 1964. The program provided for several levels of instruction with strong emphasis given to beginning classes. Included in the program were students who had recently completed the eighth grade and would be beginning their high school career in September. The eight weeks of intensive study afforded in summer school were a decided boon to the regular instrumental instructional program. The summer program also provided special classes in music theory and chorus at four centers.

Music supervisors assist teachers in conducting up-to-date programs adapted to the needs of students who have a variety of backgrounds and interest in music. Efforts of students are reflected in individual progress rather than on the basis of rigid impersonal standards. Teachers seek to develop skills involved in music simultaneously. Each student is encouraged to develop in activities in singing, listening, rhythmic responses, and instrumental experiences, so that he may participate and reach his highest potential.

Business Education

The program of business education in the Chicago public schools has two primary objectives: to develop salable vocational skills usable in office and distributive occupations and to foster an understanding of the organization and operation of business within the free enterprise system. To accomplish these objectives 19 courses are offered in the day school program. Over 62,000 students were enrolled in these courses in September of 1963, an increase of 10,000 since 1957.

Although business courses are elective, a sequence of business subjects is suggested for those who plan to make business a career. The four vocational business programs with appropriate sequences of subject matter are as follows: accounting, secretarial, general clerical, and retailing and merchandising.

The business program is identified with the needs of the Chicago business community. The offerings are constantly reviewed by staff members in cooperation with representatives of business. An advisory council for business education has been in existence for many years, and many schools have their own advisory councils. The curriculum is under constant review and revision. Experimentation, testing, surveys, in-service training, and participation in the production of curriculum guides and textbooks are some of the activities that characterize business education.

One of the most outstanding recent developments in business education has been the teacher-coordinated work experience programs in distributive education and office occupations. Distributive education has grown rapidly in the last few years; today there are 45 programs in 42 schools. Distributive education students will earn over $1 million this year, and if history repeats itself 95 per cent of the graduates will go into full-time employment or continue their education. Today 16 high schools have teacher-coordinated office occupations programs. These programs have been developed within the past three or four years and more are on the way. The teacher-coordinators of D.E. and O.O. are specially trained; they have the students in the programs in their classes; they place them on the job and coordinate the work experience with classroom instruction. Our D.E. and O.O. programs are the largest in the United States.

Many steps have been taken in recent years to improve the program of business education. A partial listing will serve to show the extent of the undertakings.

A secretarial skills laboratory is operated on an experimental basis at Kelvyn Park High School.

An enriched two-year course in shorthand is offered at Kelvyn Park. Students move at a more rapid rate, more practice is given, and additional training in office practice and machine operation is included.

A course in"Notehand" is offered at Bogan for the college-bound.

Pilot programs in shorthand for the gifted were set up at Taft and Fenger high schools.

Experimental programs for boys in both shorthand and typewriting have been offered at Kelly High School.

Machine transcription on a full-class basis has been introduced at Lake View and Harrison.

A comparative program in Pitman shorthand is being conducted at Roosevelt with control and experimental classes. The experimental group will cover the theory in one semester instead of two.

Stenotype was introduced into the offerings at Chicago Vocational High School in 1962.

Experimental studies on the electric typewriter were conducted at Kelly and Austin prior to their city-wide purchase. Now every high school is provided with some electric typewriters for instruction purposes.

Advanced bookkeeping has been introduced into some high schools. College credit is given in some instances.

An income tax course is offered at Kelly to advanced bookkeeping students. The course covers preparation of returns for individuals and small businesses.

Key punch operation was introduced into Chicago Vocational High School to provide training in elementary unit and record keeping. The course is being expanded at the new Kennedy High School where both key punch and the Selectric with simulated key punch keyboard will be used.

Printing calculators have been added to office practice equipment in recent years. This is a new type of machine which is becoming used more widely in offices.

Manpower Development and Training Act programs for training clerk-typists and clerk-stenographers have been organized during the past two years.

Bookkeeping classes have been equipped with batteries of such new machines as ten-key adding, full keyboard adding, and desk model bookkeeping machines. Students have the opportunity to become familiar with techniques of operating these machines.

Spelling has been emphasized through city-wide contests sponsored by the National Office Management Association.

A research study, "Prediction of Achievement in Shorthand," involved five schools.

Contests in skill subjects are sponsored each year. All schools participate and the contests have proved to be good motivating devices.

A continuing testing program for the purpose of establishing standards is in operation.

The Bureau of Business Education sponsors and administers several in-service programs each year. Over 500 teachers attend these workshops and classes. They are designed to improve methods of teaching and to provide economic understanding.

Typewriting has been introduced into several elementary schools in recent years.

Over 90 business clubs have been formed during the past seven years:

30 Distributive Education Clubs of America
17 Future Business Leaders of America
45 Associations of Future Distributors.

Distributive education laboratories have been rehabilitated at Crane, Lake View, and Tuley high schools. New D.E. laboratories are scheduled at Jones, Kennedy, Orr, and Hubbard high schools.

Distributive education was offered in 1964 in six summer schools located in disadvantaged neighborhoods.

A well-developed public relations program is evidenced by such things as the D.E. Employer-Employee Luncheon Conference which attracted 1500 people, participation in numerous local and national conventions, membership in civic and business organizations, radio and television appearances, and articles.

In the future, education for business should continue to change in response to studies of needs of the business world. The demand for office and distributive workers continues. In the years ahead more teacher-coordinated programs in office and distributive education may be expected and probably they should be expanded to include bookkeeping and accounting.

A program of data processing instruction suitable for high school students is being formulated and should be in operation before the end of the year. The use of greater numbers of newly invented office machines in the classroom as money becomes available should become a reality. The equipping of schools with secretarial laboratories is desirable as are distributive education laboratories, and they should continue to be installed in our high schools. Emphasis is given to personality development, proper grooming, and business ethics; this is also important and should continue with perhaps even greater emphasis.

Home Economics

Family life is basic to a stable community and nation; home economics education plays a vital part in enabling future homemakers to cope with the multiple problems they face in order to maintain healthy, happy, successful families. Rapid changes in our society and our economy, such as earlier marriages, a greater number of employed women, the higher birth rate, and the influx of rural residents into the city, have required adjustments and changes in home economics education.

In an effort to keep the offerings up to date and of good quality, the Teaching Guide for Home Economics was published in 1959. Graduate courses have been sponsored through Chicago Teachers College, and in-service training of teachers has been implemented through meetings, classroom supervision, departmental conferences, and preparation of teaching materials.

In teaching there has been an increased emphasis on the individual as a person and on family relations. In an effort to prevent dropouts and to create means for earning and for learning an occupation under educational supervision, some cooperative programs have been established. These have included programs for nursery school assistants, hospital and food service aids, and alteration assistants.

Preparation of the Curriculum Guide for Home Economics for High School, currently being written, includes the following one-year courses. New courses are indicated by an asterisk.

* Home Economics Survey
* Child Development
Clothing for Individuals and Families
Food for Individuals and Families
Home Management
* Personal Development and Family Living
* Home Economics Related Occupations

The courses to be added, as indicated by the asterisks, show evidence of the effort being made to adequately meet the needs of young people. In addition, more emphasis will be placed on courses at high school level for adults who have had no formal education in these areas; it is expected that this emphasis will include adequate supervision by a home economist working closely with these courses.

Industrial and Technical Education

The Chicago public high schools have been active in providing shop and drafting instruction since the establishment of the first manual training department in October 1886. Industrial education helps prepare students for effective living in our industrial society by providing educational shop and drafting experiences which deal with the materials, processes, products, and occupations in our technological society.

Shop and drafting instruction in the general and technical high schools teaches the principles, techniques, and appreciations of trades and crafts as they are practiced in modern industry. The educational emphasis of shop and drafting instruction may be general, technical, or vocational. The industrial education program provides for a range of student abilities, needs, and goals. Since vocational shop and drafting courses are discussed in Study Report Number Eight of the 1964 Series, only the shop and drafting courses which emphasize general and technical education are discussed here.

Sixty new shops and drafting rooms have been added to the general and technical high schools in the past ten years; in addition to this, many of the older shops have been modernized with new equipment, better lighting, and safety devices.

The enrollment in fourteen industrial education subjects as of January 1964 was 34,299 students.

The curriculum of the shop and drafting courses in the general and technical high schools has been completely revised and evaluated by educational, industrial, labor, and community leaders. The new curriculum guides for shop and drafting contain courses of study in general shop, graphic arts, woodworking, electricity, machine shop, automotive training, and drafting.

The Chicago public schools are active in training technicians under NDEA, Title VIII. Automation, atomic power, electronic data computers, and many other technological and scientific developments are creating an increased demand for highly skilled technicians to serve as members of research, design, development, and production teams of engineers and scientists.

There is a need for many more technicians in the Chicago area. The Chicago public schools are active in training technicians to help provide the skilled technicians that industry needs. All ten technician training programs have been developed under the National Defense Education Act, Title VIII. The Chicago Board of Education is reimbursed 75 per cent from state and federal funds; a list of the programs follows.

Technicians are trained at five Chicago public high schools in new well-equipped laboratories as follows:

> Lane Technical High School offers a course titled Mechanical Design Technician to seniors.
>
> Dunbar Vocational High School offers a one-year post-high school technician course in aviation electronics and instrumentation.
>
> The Southeast Branch of the Chicago City Junior College trains technicians at the post-high school level in Industrial Chemistry, Electronics, Mechanical Design, Automation and Controls, and Electronic Data Processing.
>
> The Wright Branch of the Chicago City Junior College trains technicians in Mechanical Design and Electronics.
>
> The Loop Branch of the Chicago City Junior College trains technicians in Electronic Data Processing and uses the central office electronic computers part-time for instruction.

The Chicago public high schools technician training programs provided technician training for 1490 students during 1963-64; this helps to meet the urgent need for technicians and provides many Chicagoans with well-paying jobs in business and industry.

The industrial education program in the Chicago public high schools provides the knowledge and skills from industry and the trades to make the student technologically intelligent and provides a sound modern base for future vocational and technical training. Continuous evaluation of industrial education content proceeds, through advisory committees selected from leaders in business, industry, unions, educators, and laymen, to keep the program abreast with technological development in industry.

Health, Physical Education, and Safety

The secondary school program in health, physical education, and safety is a required four-year sequence of work in the acquisition of health knowledge and practices, gymnasium and swimming skills, safety, and driver education.

Increased emphasis has been placed on the medical-dental health education program and on physical examinations for ninth grade students and for all new students entering our high schools for the first time. Since 1960, statistics indicate 87 per cent of these students have obtained the medical examination, 86 per cent the dental examinations.

Complete revision of the high school health education teaching guide is now in progress. Two booklets titled Infectious and Communicable Diseases and Information about Narcotics, both resource materials for teachers, were distributed at health education in-service meetings held in the spring of 1964.

In line with the philosophy of the President's Council on Physical Fitness, the High School Girls' Physical Fitness Test Handbook was completely revised, using age level rather than grade level norms. The High School Boys' Physical Fitness Test Handbook was published in 1961 and revised in 1963. Participation in the annual testing program involved 99,850 high school students in 1964.

In the area of swimming instruction, increased emphasis has been placed upon following American Red Cross procedures and providing opportunities for students to pass the various Red Cross swimming tests to be properly certified.

An extensive swimming pool survey was made at each school, including facilities, safety practices, instructional methods, and equipment and supplies. Swimming Pools, a Staff Manual was written and distributed in 1962 and revised in 1963.

Girls' Athletic Associations in the various high schools have enlarged and expanded. A contitution was developed and adopted by the

the teacher-sponsors, along with a Guide for Teacher-Sponsors of the G.A.A. The point system for awards was thoroughly revised. The student G.A.A. handbook has also been revised and is being printed.

The boys interscholastic program, reflecting the increased enrollment in the Chicago public high schools, has shown tremendous growth. In basketball alone, over 800 games are played in one season. The governing body for the conduct of interscholastic competition, the Board of Athletic Control, has revised its constitution and by-laws and all eligibility forms for the various sports.

Cheerleading, a Handbook for Teacher-Sponsors was developed in 1963 to serve primarily as an aid to new sponsors seeking help in the organization and administration of cheerleading groups. Some months later a very successful cheerleading clinic was held which attracted over 400 cheerleaders and sponsors.

Annual in-service meetings are held for department chairmen (men and women), Girls' Athletic Association sponsors, and cheerleader sponsors. Meetings for women department chairmen and Girls' Athletic Association sponsors were resumed in 1959 after a lapse of 12 years. Since then, regular department chairmen meetings for men teachers have been initiated.

There has been tremendous activity in the area of curriculum development during the past years. Committees working under the guidance of the Department of Curriculum Development are in the final stages of production on the following guides:

Physical Education - Boys, Grades Nine through
Twelve - Physical Education Teachers (Men)

Physical Education - Girls, Grades Nine through
Twelve - Physical Education Teachers (Women)

The school-park plan, which provides for the use of outdoor facilities for physical education classes, has been incorporated in the planning and construction of all high schools built within the past several years.

During the summer of 1962, a revised set of civil defense instructions was prepared and sent to all high schools. Arrangements were also made for the distribution of Geiger counters for class instruction in connection with the high school science courses. Contributing to the civil defense program is a junior first aid course which is taught to all high school juniors as a part of the health education program.

In 1961 the first Manual of Fire Prevention and Safety was prepared and distributed to all high schools. Another innovation which affects high school teachers is the new Employees' Safety and Accident Prevention Program, inaugurated in 1960. This program embraces all employees whether assigned to the classroom, office, or shop.

Another publication developed was a teachers guide in Driver Education and Traffic Safety. In 1960, a transition was made from an integrated traffic safety program which was taught partially in Science I, English III, and Civics II to a direct course which is now taught in the sophomore year as a part of the health and physical education curriculum. Teacher workshops in driver education have been conducted each year since 1960. The practice driving phase of driver education was initiated at one center in 1960. From this small beginning it has grown to a total of sixteen centers which, during the summer of 1964, served 10,200 students from private and public schools. The equipment and facilities prepared for this program included 16 classrooms, 13 trailers (each with 12 electronic cars and 1 scoring machine), and 102 automobiles which were loaned to the Board of Education by automobile dealers in the Chicago area. Scheduled for this program were 130 qualified teachers who taught these students safe driving attitudes and skills. The program will continue during the school year after school and on Saturdays.

It will be recommended that, instead of teaching the classroom phase of driver education once a week for two semesters, it should be taught twice a week for one semester. The remaining semester of the year two periods per week will be devoted to first aid instruction which will include the medical self-help course as advocated by the Civil Defense Corps and the Chicago Board of Health. It is estimated that the expansion of the driver education program has been completed, permitting a greater emphasis to be placed on the improvement of instruction, facilities, and equipment.

As physical education in Chicago enters its 79th year as an integral part of the total educational curriculum, there is increased interest and enthusiasm for the future. Plans do and should include more in-service meetings for physical education teachers at the secondary level, the completion and distribution of the three health and physical education teaching guides for high school level program, continued upgrading of facilities for developmental activity, and renewed conviction of the value of participation in health, physical education, and safety education toward the goal of maximum fitness for all.

Chapter VII

SUMMER SCHOOL

Growth of the summer schools has steadily increased since 1955 when the tuition charge for attendance was eliminated. Enrollments have increased from 21,792 in 1954 to 111,424 in 1964. Of that number, 44,167 were high school students.

The wide acceptance of summer school leads many students to enroll for summer classes which they can not take during the regular year because of their heavy regular year study schedules. The average student can choose from a full schedule of regular subjects to improve his progress. Students may attend any school where subjects in which they are interested are being taught. Distributive education was offered in 1964 in five schools; this was the first time this course was available in the summer, and 107 students enrolled. Available also is the opportunity for students who have failed to repeat the courses in which they failed.

Music offerings were increased in 1964 to provide band instruction, beginning and advanced, in 29 schools. Music Theory and Harmony, chorus, and string classes, beginning and advanced, were available in four high schools. For the first time in any subject area, recommended June elementary graduates were admitted into the summer high school classes in instrumental music.

Classes for academically talented students were offered in 1964 in five centers and in five subject areas: chemistry, physics, mathematics (Trigonometry, Algebra 3, Geometry 3), English (4th year), and history. These classes operated on the level of honors classes and enrolled 446 students. Each class carried one full year of credit.

Summer experimental programs in 1964 included five seminars for talented, creative students and those with scholarly abilities and interests: Light, Color, Structure - An Action Seminar in Art; French Day House; Shakespearean Festival Seminar; English/Social Studies Seminar; and Mathematics/Science Seminar. Individual and group projects; contact with outstanding artists and scholars as lecturers, guides, resource persons, and teachers; field trips; unbroken periods of time for concentration on an area of study; contact and discussion with able contemporaries were characteristic of the experimental seminars. These classes were on a city-wide basis and offered special enrichment opportunities for the 181 students enrolled. No credit toward graduation was given for these experimental seminars, but students received certificates indicating their participation and achievement.

One school offered to the students in the "100" program a special English seminar. Included in the course were scheduled trips to the Art Institute, the Chicago Historical Society, the Chicago Natural History Museum, and the Museum of Science and Industry. Also available, but optional, were trips to downtown theaters and the University of Chicago Theater. Parents were encouraged to attend activities planned for the evening. The school library cooperated by compiling a special family reading list and making the recommended books available on a summer loan basis. An outside speaker addressed the group each week.

Special counseling and career programs have been provided since 1961.

The increased interest and enrollment has significance in relation to the current trend toward a twelve-month school. This interest and use of the summer months should continue to be encouraged and special programs should continue to be developed.

Chapter VIII

CO-CURRICULAR LEARNING OPPORTUNITIES

Co-curricular learning opportunities comprise a phase of the secondary school program which is an important dimension of the high school organizational pattern in the Chicago public schools and one which has a significant impact on the adolescent group itself. The value of the co-curricular program has been long established in the high school setting. Co-curricular activities are carefully articulated with the academic offerings of the high school to assure continuity and recognition in the school program. In many instances, they provide an extension of the curriculum itself. These activities often motivate students toward better accomplishment in the academic program and provide an incentive for some students to remain in high school. They permit student participation in the life of the school and contribute toward a more realistic appraisal of self on the part of adolescents. Co-curricular learning opportunities may be thought of as strengthening civic and social attitudes and special interests.

The Chicago public high schools make available co-curricular opportunities through the following activities:

special interest clubs (in all areas of the curriculum and in
  fields of special interest, such as foreign language clubs,
  history clubs, stamp clubs, international relations clubs,
  Future Teachers of America clubs)
school publications
student councils
debating clubs
musical organizations
service groups
athletic teams (intramural and intraschool)
cheerleading.

Activities such as these develop interests and skills that enable the student to enjoy wholesome leisure, not only in the present but in the future. They frequently provide for an exploration of interests which may develop vocational importance. Each activity is coordinated within the school program through a teacher-sponsor who is responsible for directing the activities of the students involved.

Chapter IX

SPECIAL EDUCATION FOR THE HANDICAPPED AND MALADJUSTED

In the Chicago public high schools, blind,deaf, and partially seeing children of average or superior ability are completely integrated into regular classes in regular schools, with profit to all concerned. However, certain blind, deaf, and partially seeing children with multiple problems have no program available after they become too old to profit from continued residence in an elementary program.

Chicago has one high school for the physically handicapped. Minor adaptations of physical facilities, and flexibility in programming have already made it possible for more borderline students to remain in their home high school. In new high school construction, acceptance of the standards for removal of architectural barriers in public buildings recommended by the American Standards Association will speed this trend.

Chicago high schools are increasingly called upon to receive students who have been in local social adjustment schools, state custodial institutions, or schools and hospitals for the emotionally disturbed, or who have been excused until termination of pregnancy. To reduce recidivism among these groups, special provisions for welcoming, counseling, guidance, special programming, and other adaptations are already being made and need to be strengthened. A special counselor or social worker is needed.

For the mentally handicapped, rapid strides have been made at the high school level in the past decade. In May 1953, there was one high school class for the mentally handicapped enrolling fifteen students. In April 1964, secondary classes for the educable mentally handicapped were in fifteen high schools. These classes were located in twelve of the twenty-one school districts. Total enrollment was 403 students; twenty-five teachers were in the program.

These programs have admission criteria which exclude approximately the lower half of the students served in the special classes for the educable mentally handicapped at the elementary level. The expansion outlined in the paragraph above indicates the value of the present program for the "upper" EMH group. The work needs to be expanded to all sections of the city and another form of education for a "lower" group instituted, since all of these students need education at least to the age of eighteen. Practically no possibilities of employment exist for them below that age.

The effects of the population explosion at the secondary level will make this program increasingly difficult to administer in terms of space. Consideration should be given in the utilization of present buildings for continued provision for this group. New buildings should provide some classrooms of smaller size for educable mentally handicapped students. These rooms would serve as homerooms, study halls, and basic classrooms for the group.

Chapter X

NONCLASSROOM PROFESSIONAL SERVICES

Emphasis upon the individual leads to special services to each student which will enable him to fulfill his maximum potential. There has been a continuing increase in the kind and amount of special services available to the high school program within recent years. These services include those of curriculum consultant, guidance, health, library, psychological and psychiatric, speech therapy, social work, and supervisory personnel.

The professional staff members associated with these services are engaged in activities within the school, within the home, and within the community that enable the instructional program of the high school to function better.

Curriculum Consultants

Consultants in curriculum work with administrators and teachers in the improvement of instruction. Consultants plan and revise the curriculum guides, evaluate new teaching techniques and special courses of study, provide in-service activities,present workshops in their respective fields, and assist in varied educational activities within the area of instruction.

At present there are 35 curriculum consultants serving the needs of all of the public high schools and elementary schools in Chicago. They are qualified experts in the fields of language arts, foreign language, mathematics, science, and social studies. The consultants are assigned to the Department of Curriculum Development and function throughout the city. Each course division in the high school science department has one consultant for the city, namely, general science, biology, chemistry, and physics. In each field--social studies, mathematics, and English-- there are two consultants, one for the north side and one for the south side. Foreign language consultants are provided in the curriculum areas of French, Spanish, and German.

Guidance and Testing Programs

The guidance program in the Chicago public high schools has made significant contributions to the education of youth. Its expansion and development since 1956 has paralleled national guidance trends but has also reflected local school needs.

The high school program in 1937 provided one full-time adjustment teacher in each school who was responsible for maintaining a cumulative record system, coordinating and conducting all phases of the school testing program, interpreting the testing program to students, teachers, and parents, offering counseling interviews with students and parents, and articulating programs between elementary and high schools. In 1939 the placement counselor program and the self-appraisal and careers classes were organized. A third counselor position was added to the high schools, that of attendance counselor, in 1944.

In 1956 the counselors in high schools were brought together for coordination under what is now known as the Bureau of Pupil Personnel Services. The following advances have been achieved in the area of counseling since this bureau was established:

an organized program of services, progressive and cumulative, from year to year, at the high school level
assignment of counselors to responsibility for the guidance needs of a section of the student body
reorganization of high school guidance programs to afford continuous contact for each student with the same counselor throughout his four years of high school
an electronically processed testing program in grades 6, 8, 9, and 11
expansion of the counseling supervisory staff
expansion of the Urban Youth Program
increase in requirements for counselors
degree program in school guidance initiated at Chicago Teachers College south
establishment of freshmen orientation day for high school
development of back-to-school week.

In 1955 there were 156 high school counselors with a ratio of 700 students to one teacher-counselor. In 1964 there are 283 counselors, in addition to the assistant principals who also do guidance work. The present ratio is 400 students to each counselor.

In February 1959, a new program of city-wide testing was initiated. Electronically processed testing programs have been organized in grades 6, 8, 9, and 11. The testing program enables counselors in the high school to help students in selecting an appropriate program of study, deciding upon college choices, and in making career plans. The testing is placed at levels in the school program where maximum utilization of results can be achieved.

There has been a growing number of financial aid awards to Chicago public high school students within the past several years. Students numbering 1427 were granted awards in 1962. This figure can be compared with the 1958 figure of 1144 awards to indicate the upward trend for scholarship awards to Chicago public high school students. The Illinois State Scholarship Program has awarded more scholarship grants to Chicago students within the last two years than previously. There were 797 scholarships awarded by the Commission in 1962.

The number of organizations making awards has grown form 159 in 1958 to 213 in 1962.

An analysis of student plans following graduation shows that the percentage of youth planning a post-high school education has increased considerably. In January 1964, a total of 56 per cent of the graduating class planned full-time post-high school education.

Group guidance classes have been organized in grades 7 through 12. Weekly, class-size group guidance sessions are held by the counselors. These sessions are planned so that students may develop new insights concerning themselves and their behavior. The counselor works with students at their level of maturity. Sessions are sequential in nature and provide for interaction among the students so that better self-realization and desirable attitudes are often the result of the dynamics of the group situation itself. Group guidance strengthens learning since it provides an orientation for the student which makes possible the fuller realization of personal, social,and educational goals.

The guidance program in the high schools emphasizes articulation with the elementary school. The counselors in the high school undertake interviews with elementary students and their parents on Parent Interview Day. During these conferences a record of each student's elementary school progress and test results are evaluated. An inventory of the interests, attitudes, and plans of the student are also discussed. This information enables the student and parent to make more careful decisions about the type of high school and the kind of educational program which is best for the individual.

The Urban Youth Program is concerned with young people who have left school. It has three aspects: Census and Counseling, Education and Employment, and Training and Transition. The school through this program assumes a continuing responsibility for young people who have not completed their formal education. The Double C Program (Census and Counseling) consists of a city-wide census of dropouts and subsequent counseling of young people who are interested. The cooperative work-study experience is the second facet of the Urban Youth Program. It provides a program of cooperative endeavor between industry and the schools in which young people spend approximately one-third of the time in school and the remaining two-thirds on the job.

The Division of School Attendance has undergone some changes in relation to its organization in the last few years. There has been an increased number of attendance officers and home visits in the last ten years:

1953 - 178 officers	160,646 home visits
1963 - 209 officers	228,499 home visits
1964 - 211 officers	

In 1957 attendance officers were assigned on a district basis and were made an integral part of the school system. Requests for additional officers, home visits, and further assistance are now channeled through the district superintendent's office.

In 1962 head officers were appointed to each district to coordinate the administration of local attendance.

The name "truant officer" has recently been changed to "attendance officer" as a result of the increasing responsibilities of the position. In the past, these officers were generally concerned with the Illinois and Chicago attendance laws. Presently, the Division of School Attendance plans through effective action and cooperation with school administrators to visit the homes of those students with high absentee records, ascertain the causes, and recommend proper help and/or counseling. In-service education provides the opportunity for the professional and technical assistance that is available.

In 1962-63 the Division of School Attendance sponsored a special back-to-school drive in August. One hundred sixty-five officers visited the homes of 15,000 children in an attempt to encourage continued school enrollment. This program has proven its value and is being continued this year.

The Division of School Attendance has prepared a manual for use by its officers, principals, and district superintendents. This manual provides information as to qualifications of officers, their duties, and general procedures.

Health Services

One of the primary objectives of a school health program is education in healthful living. In fulfilling this objective, the teacher-nurse, as a member of the school team specializing in health, assumes an active role in helping to provide learning experiences which will motivate pupils with the help of their parents to secure and maintain optimal health and to assist those students with non-remedial defects to accept and adjust to their physical limitations. It is most important that the teacher-nurse work toward early detection of defects which present the greatest likelihood of impeding a child's school progress or adjustment. Therefore, she has a responsibility to help plan activities for eliminating or minimizing health problems that interfere with effective learning and to assist teachers in recognizing health deviations.

The teacher-nurse implements her program by participating in the following:

program planning and evaluation
health appraisal and follow through of students with health problems
prevention and control of communicable diseases
health education
prevention and control of illness
emergency care.

She provides counseling to students and parents in the home and in the school. She interprets health problems and medical services to school personnel, parents, and community. She works with physicians and community agencies. She prepares records and reports in the interest of maintaining continuity of health supervision and for planning and evaluating the school health program.

An increase in number of teacher-nurses will enhance the school health program and the teacher-nurse services in other areas.

There is need for an increase of community health facilities and medical services where screening programs for physical and emotional problems, inoculation, and tuberculin testing could be done. This would put the programs in their proper perspective as community and family responsibilities. The teacher-nurse would work closely with the community agencies, and would be the liaison between the school, home, and community regarding the student's health problems.

Library Services

The teacher-librarian in Chicago has an important role to play in the education of high school youth. The library is an essential part of the educational program. Its resources enrich the curriculum of the students and contribute to the development of youth. The library in Chicago high schools serves as a materials center for books, periodicals, pamphlets, newspapers, maps, tapes, films, filmstrips, discs, and realia. The aims of the library are to provide students with materials and services most appropriate and meaningful in their growth and development and to cooperate with teachers in the selection and use of library resources.

The teacher-librarian is equipped to offer the following services:

guidance in all phases of reading to meet curriculum and recreational needs
instruction in the use of library materials
reference service and research aid
personal and social guidance in the use of materials.

The library is a vital source for in-service education of the staff and continuing professional growth for each faculty member. Through the services of the high school librarian, curriculum experiences are enriched and deepened, and an appreciation for the use of libraries for self-improvement throughout life is established.

The library in the Chicago public high schools is a pleasant expanse of materials, work space, and study areas. A large and varied assortment of materials at many levels of difficulty and interest is offered. Professional materials for the staff are easily accessible, and there are supplementary materials for classroom loans. Listening and visual equipment and materials, such as slides and pictures, are available for use. Many school libraries in Chicago public high schools have multiple library rooms which are set up according to such subject areas as social studies and English. In many high schools there is a library classroom for instruction in the use of the library. Conference rooms adjacent to the library for study are also found.

The library in the high school is available for individual and class use throughout the school day. Its resources are arranged to permit the most efficient use of the library. Materials are readily available for classroom loans and home use by students. Printed and audio-visual materials are catalogued and arranged according to standard procedure. For best utilization of resources, it is recommended that the school library be open for use one-half hour before classes begin in the morning and one-half hour after classes end.

In the Chicago public schools there are 51 centralized high school libraries and 26 high school branches with libraries. Average expenditure per high school student in 1964 was $1.50. This is in contrast to the $.93 per student spent in high school in the year 1953. It is recognized that allocations should be increased gradually if the high school library is to provide the rich resources necessary for a quality program in secondary school education. Between $6 and $10 per student should be spent for library books.

It is important that the librarian exercise his function as a teacher in the high school organization. Librarians are invited to attend departmental meetings and to serve on curriculum committees in the school. This practice enables the librarian to be informed of current curriculum trends and to correlate library projects with classroom projects of individual teachers. The librarian can stimulate and encourage student patronage by presenting new information to students about the services of the library in written form on a regular schedule at division periods. He can further stimulate interest by a visit to the classroom where he explains to the students how to get materials in the library. When the librarian brings materials on a cart directly to the classroom it seems to be an effective method of arousing interest. This is particularly true in schools where large numbers of the students are culturally disadvantaged. Where an adjoining section of the library is set aside for the use of audio-visual materials in foreign language or English, increased educational viewing and listening activities ensue. Additional practices which are encouraging wider use of the library in the Chicago public high schools are book discussion groups or seminars, use of educational television in the library area, opportunities for independent study and research, and recording of tapes for future instruction and presentation.

The library in a new building should have maximum accessibility so that it can be used before and after school. Its location should be central for the entire school and away from places with distracting noises, such as the gym or cafeteria. Its size should be adequate for the present high school student body, but construction should be flexible enough to permit expansion. The design of the new library should make maximum use of space with ample provision for audio-visual equipment. Multiple reading rooms or special library areas are recommended for large high schools. The library should include carrels for individual study. Additional space for group study or conferences should be provided in small conference rooms.

In its emergence as an instructional materials center, the library will employ the newer media of communication:

overhead projector, slides, thermofax, tapes
programed instruction using teaching machines and other auto-instructional devices.

This type of material will require more in-service training for new teachers in the use of library tools and equipment. The library will also provide space for faculty and students to construct materials and to tape and record presentations on discs. Time and space-saving devices such as automatic charging systems and microfilm will be increasingly available in the high school library of the future.

The role of the librarian-teacher will continue to be that of resource coordinator in the high school. He will provide orientation and general instruction in large groups, possibly through the use of television; he can devote more time to individuals and small groups, as additional clerical staff becomes an accepted practice.

Psychological and Psychiatric Services

The school has a major role in the promotion of good mental health. It is during early childhood and adolescence that attitudes and personalities develop. The school psychologist at the high school level has a role to play in promoting good mental health by working with the teacher and the administrator. The psychologist contributes his specialized knowledge to the solution of problems affecting children in the school.

The primary function of the school psychologist is the diagnosis of severe learning and behavior problems of young people in order that educational programs may be adjusted to meet their needs. The psychologist interprets behavior and makes recommendations to teachers and parents. Although not primarily concerned with treatment, he does provide a limited amount of guidance and acts as a liaison person with other social agencies.

The present psychological services will have to be expanded to meet the needs of increasing enrollment and the diversified problems and range of ability of pupils served by the high school.

The more complex learning and adjustment problems are referred to the medical department for psychiatric appraisal. The function of the psychiatrist is one of diagnosis followed by recommendation to both the school and the parent as to the procedure in handling the problem. The psychiatrist himself is not concerned with treatment.

There is a need for additional psychiatric personnel in the schools today. A greater incidence of truancy, abnormal behavior, and pre-delinquent and delinquent acts are resulting from social changes taking place within the structure of family life in our city today.

The demonstration project in in-service education of teachers in normal and abnormal growth and development recently conducted by the Bureau of Health Services in eight schools has been most productive. Consideration should be given to extending this type of project. An understanding of the contributions which can be made by the psychiatrist to the solution of emotional blocks to learning is necessary for all school personnel.

Speech Therapy

The speech therapist is a trained specialist working with young people who are significantly handicapped by speech impairment. Speech problems of high school youth include stuttering, functional articulation, cleft palate, neurological defects, voice disorders, and speech impairment due to hearing loss. Functional articulation accounts for 65.3 per cent of the total speech enrollment. Stuttering accounts for 23.5 per cent. The incidence figure used nationally is five per cent of the school population. The high school figure is less because speech maturation has occurred.

Each therapist maintains a maximum case load of 100 at any given time; this complies with the state of Illinois reimbursement requirements. Chicago certification requires a major in speech correction and 18 hours of credit in education. The major includes 23 hours in speech correction and 6 hours in audiology. Both elementary and secondary school therapists have the same certificate.

Seven therapists work in high school exclusively. Two others work part-time in high schools where elementary and high school units are on one campus. Thirty-five regular high schools are served by speech therapists. When service is instituted in a high school, students at the branch are eligible for speech therapy. Such students go to the main building for their speech therapy.

The speech correction program in high school is recognized as contributing to better pupil potential and better adjustment of the individual student. Help with speech problems enables the older adolescent to function more realistically in his personal-social relationships. Since the therapists work with small groups, the individual guidance offered through this program also contributes to a better concept of self.

Each high school should have available the services of a speech therapist. A school may have a full-time therapist or share his services with another school. Speech therapy in high school should be offered twice weekly rather than once a week for best results. Recognition of the contribution of the speech therapist in secondary education is important. The therapist should have an opportunity to be included in some of the professional discussions and activities of the English department.

The room provided for the speech correction teacher should be pleasant, well-lighted, heated, and ventilated. It should be free of noise and interruptions.

Social Work Services

School social work is part of an interprofessional approach to provide help within the school system to those students who have not been able to use the educational resources of the high school effectively. Trained social workers bring to high schools special knowledge in the areas of emotional growth, mental health, and personality development. They have special skills in counseling relationships and in interviewing. The responsibility of the social worker is to complement the work of the regular school staff by acting as a consultant on the origin and treatment of those environmentally based emotions and/or problems which are reflected in deviant school behavior.

The problems may be chiefly within the student; they may originate in his family relationships; they may be the result of poor community conditions or of economic deprivation. The student may be helped directly by the social worker through a series of case work interviews which help him in finding his own strength and in accepting responsibility as far as he is able in working out his own school problems. He may be helped individually or in conjunction with his parents, the focus of contact being the student's limitations, abilities, and needs as seen by the student, the school, and the parents. The aim of the contacts is the constructive participation of all in the school-child-parent relationship which is essential in achieving the goals of education.

A close working relationship is maintained with teacher, principal, and other school personnel, so that each can be mutually helpful in promoting the education of the student. The social worker is cognizant of all the "helping" resources of the community, so that he is able to refer students selectively to those agencies most suitable to the individual problem if it is decided that the situation cannot be resolved within the school setting. The social worker is a liaison person between the schools and all the "helping" agencies within the community.

Supervisors

Supervisors and special teachers are staff officers whose professional services are available to teachers, principals, and district superintendents. Their primary objective is to improve instruction in special areas through in-service education of teachers and to act as resource personnel.

> Supervisors visit classes, hold conferences, and employ those evaluation procedures that seem to be most promising for the improvement of the teacher and for the discovery of the individual strengths and weaknesses.
>
> Supervisors assist and appraise the work of the experienced teacher.
>
> Supervisors provide leadership and coordination of instructional materials. They learn what is taking place in various classrooms, the special techniques teachers are employing, and what instructional materials are being used.

Supervisors provide teachers with special resources which would not otherwise be available to the individual teacher.

Supervisors interpret educational policies in the special areas of learning.

Supervisors provide opportunities for departmental meetings to discuss common goals, methods, and other factors.

At present, subject-matter supervisors are appointed in three areas of learning: art, music, and physical education. They consult with teachers within an assigned district and therein offer their services. The number of these supervisors should be increased, so that school visits could be more frequent and teachers could have more benefit from these resource people.

Chapter XI

SCHOOL-COMMUNITY RELATIONS

The high school instructional program is strengthened by the many resources available within the city-wide community. Cultural resources, such as the Art Institute, the Museum of Science and Industry, the Shedd Aquarium, the Chicago Historical Society, and the Chicago Natural History Museum, are widely utilized in all areas of the high school curriculum.

In the area of commerce and industry, increasing cooperation is evident in the work-study programs. These plans affect students who are enrolled in the regular high school program as part of the school curriculum.

The firms indicate to the schools the nature of the education and training which is to be provided as a part of the student's work-study effort.

Various business groups within the community sponsor activities that give recognition to high school youth. These activities include art and science. The annual Chicago Public Schools Student Science Fair is an enterprise sponsored jointly by educators and industry. Student art exhibits are displayed in business establishments where the public may see them.

Many scholarship awards are given to Chicago high school students by organizations and individuals within the city. A total of 225 organizations, associations,and individuals sponsored 1,711 awards to Chicago public high school students in 1963.

Chapter XII

THE REALITIES OF THE EDUCATIONAL CHALLENGE

The process of urbanization has resulted in unprecedented movement of people from rural areas to the city, from the city to the suburbs, and from one community to another within the metropolitan region itself. The present social evolution in which the nation is involved is continuing with great rapidity. Complex technological and economic changes in the society are reshaping land use. Population density is characteristic of metropolitan living.[1] A finer division of labor brought about by automation and the increasing specialization of workers in modern society create new conditions both in the culture itself and in the educational system.

The dynamics of the urban economy have enabled the nation to achieve a high degree of abundance. Education is more than ever necessary in this kind of society in order to offer individuals full economic opportunities. As society continues to become increasingly complex, the educative process itself must change in response to the demands of the society. The interdependency of people in modern society and the complex interrelationships that result from the urban evolution indicate the urgency of cooperative endeavor at all levels of society. Interdependency is a significant element of social organization in the structure of industry, transportation, science, communication, government, and education.

The interdependency of all people in the nation and even in the world confronts modern society today. America's survival as a nation depends upon our ability to weld together people of diverse cultures. In a free society the diverse talents of all citizens need to be nurtured. The wide range of individual potential within society has to be developed if the society is to prosper and grow. American educational theory and practice have always stressed the interrelations existing between the individual and the society.

Any reappraisal of the secondary school must evaluate the role of the school with respect to excellence and equal opportunity for all.

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[1] Jean Gottman, Megalopolis: The Urbanized Northeastern Seaboard of the United States (New York: The Twentieth Century Fund, 1951), pp. 15-16.

Everyone in modern society is important and everyone needs to be educated--but not in the same way. In order to maintain a free society, the nation has to achieve a high level of morale among all its members. The high school can provide a program of instruction that recognizes the many varieties of excellence found among youth. One of the needs of modern times has been identified as "a conception of excellence which may be applied to every degree of ability and to every socially acceptable activity. . . . The tone and fiber of our society depend upon a pervasive and almost universal striving for good performance."[2] The many routes to adulthood for youth can be identified in diversified programs of instruction in the high school.

A highly developed political system requires a highly developed educational system. The citizens who elect the President and the legislature are responsible for national progress, as well as the elected officials. In our advanced society, which is functioning in an age of expanding scale and tremendous technological growth, the educational system cannot remain static. The challenge of change is constant.

Specifically, the school must be fully cognizant of the tremendous increase in knowledge. The concomitant increase in technological capacity for the handling and retrieving of huge amounts of information forces additional responsibilities upon the school. Both factors influence the content of the educational program and the pace of educational change. The values ascribed to education are subject to continuing scrutiny in an intellectually sophisticated society where opportunities continue to expand for jobs at the managerial and professional levels but continue to decline at the level of unskilled labor. Recent trends in urban society have had a tremendous impact on the conventional program of education. More and more is demanded of the alert citizen in his efforts to keep abreast of the expansion of knowledge. Adults today find it necessary to explore new ideas in a wide variety of educational settings. Continuing innovations at the high school level are essential if young people in our society are to realize their individual potential and to serve society well.

The comprehensive high school will continue to house a diversified student population with a program of instruction adapted to each student. Instruction will be flexible to such a degree that many different kinds of learners can function in a school atmosphere which respects the individual's worth, whether that individual's education be collegebound, terminal, or "marginal." Freedom to experiment will be acceptable theory in such a setting. Elements of rigidity and formality in the present high school organization merit continuing inquiry. Current innovations in the high school organization, including team teaching, advanced placement, and effective utilization of technical equipment, are deserving of expansion and continuing evaluation. Experimentation with independent study, module schedules, and nongraded high school organization is worthy of serious consideration. Curriculum research that is concerned with new ways of organizing content fields may well reveal approaches to learning that will stimulate the individual student in his search for knowledge. The quest for excellence by each individual and the achievement of group cohesion is the goal of the free society.

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[2] John W. Gardner, Excellence: Can We Be Equal and Excellent Too? (New York: Harper & Row, Publishers, 1961), pp. 131-2.

Chapter XIII

SUMMARY AND RECOMMENDATIONS

Major Trends

The high school committee in its survey of existing practices in the Chicago public schools has found that the following are major trends.

1. Increasing high school enrollment will require additional school facilities in the immediate present and in the years ahead. The problem of financing new buildings will require funds over and above those now available.

   Since the tax resources for the City of Chicago are diminishing, the program for the future is dependent upon receiving more state and federal assistance.

2. Employment opportunities in the Chicago area will be affected by automation and the continuing exodus of local manufacturing and industrial establishments to the suburbs. This situation should condition the program of education offered by the schools.

3. The present program of the Chicago public high schools provides a diversified curriculum for each student. The task of the school in the immediate future will be to provide even more opportunities for the slow learner in all areas of the curriculum. A saturation program of work-study experiences is indicated for the high school level. Such a program requires intensive effort on the part of the school staff and financial resources far in excess of what is presently being spent on high school education.

4. Continuing expansion and development of college-preparatory curriculum are necessary. Present innovations in school organization should be expanded. Instructional materials should be continually upgraded.

5. A commitment to wide experimentation should be the policy in all phases of high school education.

Recommendations

The implementation of most of the Committee's recommendations is predicated upon the availability of increased funds. However, as pointed out in "Population Trends and Building Needs in the Years Ahead" the assessed valuation per student in Chicago has followed a declining trend for several years. Thus in the face of rising enrollments, to maintain the present standards will require additional funds and to improve the Chicago public schools to the extent visualized may call for both state and federal assistance. The building program has been aided materially in the past 12 years by several bond issues and will need similar help to meet present and projected needs.

Buildings

1. The building program at the high school level should be accelerated to accommodate the present student overload plus anticipated increase.

2. The policy of building high schools in the 1800-2200 capacity range should be continued.

3. The new building program should provide for such innovations as team teaching and for flexibility of design and arrangement for new libraries. New buildings should be planned to include minimum provisions for the physically handicapped child.

4. Sites should be acquired in the areas of special population growth.

Teachers

1. A study of the position of department chairman should be made. In large departments his responsibility should be increased, his salary should be increased, his teaching load should be reduced, and he should be provided with adequate office space and clerical service.

2. The present program of in-service education for teachers should be expanded, using consultants and supervisors as resource people.

3. In-service education for teachers should be provided in adapting the material in the curriculum guides to the needs and abilities of all students.

4. Educational opportunities should be provided for teachers to keep abreast of the times in all curricular areas.

5. Team teaching should be expanded where practicable in order to strengthen the instructional program and teacher competencies.

Nonclassroom Professional Services

1. Additional consultants should be assigned to the districts in all academic subject areas to provide for increased services.
2. The high school library should be open for use one-half hour before classes begin in the morning and kept open for one-half hour after classes end.
3. The per pupil expenditure for the high school library should be increased.
4. The present psychological services should be expanded to meet the needs of increasing enrollment and the increasingly diversified problems and range of abilities served by the high school.
5. Additional psychiatric services should be provided.
6. The services of a speech therapist should be provided for each high school according to need.
7. The number of supervisors should be increased so that teachers may receive more benefit from these resource people.
8. The number of social workers allocated to district superintendents' staff should be increased.
9. Job analysis and in-service education for counselors should be provided.
10. Clerical assistance should be provided to counselors.
11. Counseling facilities suitable for private interviews should be provided.
12. As rapidly as funds are available and as counselors become trained, the schools should move toward the staffing ratio of 300 students per counselor.

Students

1. The schools should provide for greater flexibility in scheduling many students, including the older adolescent who has passed the compulsory attendance age, enabling him to obtain a part-time job and complete his education on a year-long basis.
2. The advanced placement programs should be continued and expanded.

Curriculum

1. More work-study programs should be provided.
2. Co-curricular activities should be coordinated with the curriculum so that they are an integral part of the program.

Language Arts

1. Additional outline and source material should be provided for teaching a linguistic approach to English grammar in the next revision of the curriculum guide in English.
2. The teaching of English at the lower track levels should be reviewed to provide a radically different program of classroom activities (perhaps utilizing the best creative unit ideas of some current elementary programs) for the students to whom the traditional English program in high school presents obstacles, either intellectual or psychological, which contribute to dropping out of school.
3. The present use of lay theme readers and the provision of clerks to assist in the reading program in selected high school classes should be expanded so that all students at all track levels in all high schools may benefit from these services.
4. The emphasis on limiting the size of English classes should be maintained in the interest of improving both the quality and the frequency of individual attention to students' composition and reading development.

Foreign Language

1. Language laboratories should be installed in all high schools.

Social Studies

1. The three-year sequence in social studies should be continued.

2. A list of social studies textbooks should be prepared for use of the academically less able high school students, including authorization to use in high school some selected elementary textbooks.

3. A special guide for the teaching of economics should be provided.

Mathematics

1. Experimental mathematics programs and teaching techniques should be continued to be tried.

Science

1. A center should be established for teacher viewing of approved science materials.

2. A study should be made of the desirability of participation in the earth-science movement in the city of Chicago.

3. Participation in experimental studies with national curricular materials, team teaching, and television in secondary school science should be continued.

4. Adequate classroom and laboratory facilities for science teaching should be provided.

Music

1. More emphasis should be placed upon the relationship between music and other areas of learning, using team teaching as an aid to the achievement of this objective.

2. The selection of appropriate materials for school orchestras, bands, and glee clubs should be upgraded.

Business Education

1. A secretarial laboratory should be provided in every high school.

2. Data processing centers should be established in strategically located high schools.

Home Economics

1. A course in Family Living and Personal Development should be provided for both boys and girls in grades 11 and 12.

2. A course in Home Economics Related Occupations should be offered in grades 11 and 12.

Industrial Arts

1. The teachers should be helped in keeping up with current trends in industry and employment which are constantly changing in this atomic age.

Health and Physical Education

1. More adequate facilities should be provided for the teaching of these subjects including more indoor gymnasiums and swimming pools, more outdoor space,and additional athletic fields.

2. Two large facilities, such as field houses with adjacent athletic fields, should be provided to accommodate play-offs and finals for interscholastic games and sports of all kinds.

3. City-wide student insurance coverage should be made available with a special rate for athletes.

Special Education

1. Occupational centers, separate from the general high schools, should be established with the cooperation of state vocational rehabilitation agencies, for the less able EMH students and the multiply handicapped blind, deaf, partially seeing.

2. The EMH two-year program within the high schools should be expanded to all areas of the city, for those able to profit from the integration with the main stream of adolescent youth.

3. Social adjustment resource rooms should be established with specially trained teachers to help reduce the need for transfers to social adjustment schools.

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